

## Editorial

Dru Lavigne, Tony Bailetti

## Child-Centric Laptop to Help Address Social Needs

John Roes

## Open Sourcing Social Change: Inside the Constellation Model

Tonya Surman, Mark Surman

## Open Source, Social Innovation and a New Economy of Engagement

Stephen Huddart

## Key Elements of Social Innovation

Allyson Hewitt

## Social Innovation: Access and Leadership

Roseann Runte

## Adaptive Co-management and the Learning that Leads to Social Innovation

Nancy Doubleday

## How Universities Can Enable Social Innovation

Kim Matheson

## The CUE Factor: Community-University Engagement for Social Innovation

Edward Jackson

## Upcoming Events

## Newsbytes

## Contribute

# SEPTEMBER 2008



# SEPTEMBER 2008

## Editorial

Dru Lavigne and Tony Bailetti discuss the editorial theme. 3

## Child-Centric Laptop to Help Address Social Needs

John Roesse from Nortel explores the benefits achieved through participation with the One Laptop Per Child project. 5

## Open Sourcing Social Change: Inside the Constellation Model

Tonya Surman from the Centre for Social Innovation and Mark Surman of the Mozilla Foundation explain an innovative approach to organizing collaborative efforts in the social mission sector. 9

## Open Source, Social Innovation and a New Economy of Engagement

Stephen Huddart of the J. W. McConnell Family Foundation examines the link between open source and social innovation. 16

## Key Elements of Social Innovation

Allyson Hewitt from MaRS explains the importance of social technology and innovation intermediaries to achieve positive outcomes for social innovation initiatives. 22

## Social Innovation: Access and Leadership

Roseann Runte, President and Vice-Chancellor of Carleton University, explores the challenges for social innovation and the use of information technology. 25

## Adaptive Co-management and the Learning that Leads to Social Innovation

Nancy Doubleday from Carleton University explains how adaptive co-management can be used to foster projects that effect far-reaching change. 28

## How Universities Can Enable Social Innovation

Kim Matheson, Carleton University's Vice-President (Research and International), describes the conditions that facilitate a university agenda in social innovation. 34

## The CUE Factor: Community-University Engagement for Social Innovation

Edward Jackson of Carleton University discusses the dynamic triangle of community-university engagement. 38

Upcoming Events 44

Newsbytes 47

Contribute 48

### PUBLISHER:

The Open Source Business Resource is a monthly publication of the Talent First Network. Archives are available at the website:  
<http://www.osbr.ca>

### EDITOR:

Dru Lavigne  
[dru@osbr.ca](mailto:dru@osbr.ca)

### ISSN:

1913-6102

### ADVISORY BOARD:

Tony Bailetti  
James Bowen  
Kevin Goheen  
Leslie Hawthorn  
Chris Hobbs  
Thomas Kunz  
Steven Muegge  
Donald Smith  
Michael Weiss

© 2008 Talent First  
Network



*If the overwhelming response we received to this month's call for submissions is any indication, those engaged in open source are also passionate about social innovation. We could have easily published a 100 page issue, but opted instead to save some submissions for upcoming issues as they are also suited to the themes of Building Community and Enabling Innovation.*

**Tony Bailetti of the Talent First Network** is one of the driving forces behind the OSBR. He is guest editor this month and I think you'll agree that he has done an excellent job of finding authors from industry, academia, and non-profits who are on the frontlines of social innovation in Canada.

*This issue is jam-packed with* resources and examples of initiatives--enough to leave you thinking "I had no idea so much was happening in Canada". They aren't meant to be exhaustive, but the insights and lessons learned can be applied to similar initiatives across the globe.

*As always, the authors and* other readers appreciate your comments and references to additional resources. You can send these to the Editor or leave them on the OSBR website or blog.

**Dru Lavigne**

**Editor-in-Chief**

**dru@osbr.ca**

*Dru Lavigne is a technical writer and IT consultant who has been active with open source communities since the mid-1990s. She writes regularly for O'Reilly and DNSStuff.com and is the author of the books BSD Hacks and The Best of FreeBSD Basics.*

*Social Innovation is the theme* of the September issue of the Open Source Business Resource (<http://www.OSBR.ca>). This issue captures important aspects of how open source assets, processes, and values may be used to create social and environmental value. Some of these aspects are new and still blurry, others are clear and familiar. The publication of this issue signals a strong interest in the use of open source to support non-profit and charitable initiatives. Technology company managers, entrepreneurs, academics, contributors to open source projects, and staff of non profit organizations and foundations are encouraged to continue to use open source to enable social innovation.

*In this issue, authors from* very diverse backgrounds have contributed insightful articles that examine: i) global projects that use open source to benefit society; ii) open source-like approaches to organizing the collaborative efforts that lead to social innovation; iii) challenges and elements of social innovation; and iv) ways to align university capacity with the social innovation agenda.

**John Roesse is Nortel's Chief** Technology Officer. In the first article of this issue, Roesse describes how the open source-based XO laptop has benefited children and teachers in some of the most under-developed parts of the world and taught product developers employed by technology companies valuable lessons.

**Tonya Surman is the founding** Executive Director of the Centre for Social Innovation and Mark Surman is the Executive Director of the Mozilla Foundation. Their article describes an open source-like approach to organizing collaborative efforts which was developed by and for the Canadian Partnership for Children's Health and the Environment.

***Stephen Huddart is the Vice-President*** of the J.W. McConnell Family Foundation in Montreal. His article first examines the relationship between open source and social innovation, then organizes tools for social innovation into four categories, and finally identifies two areas where social innovation and open source are needed urgently.

***Allyson Hewitt is Director, Social*** Entrepreneurship at MaRS. In her article she identifies four key elements of social innovation and argues that innovation intermediaries are critical enablers of the success of social innovations.

***Roseann Runte is President and*** Vice-Chancellor of Carleton University. She urges scholars to create a new hierarchy of information and transform the question of access from an economic issue to one of moral and social justice.

***Nancy Doubleday is an Associate*** Professor in the Department of Geography and Environmental Studies, Carleton University. She examines three projects that used the adaptive co-management approach to support students working in autonomous groups that produced social innovations.

***Kim Matheson is Carleton University's*** Vice-President (Research and International). She identifies five conditions that facilitate a university agenda for successful social innovation and argues that universities have to consciously consider strategies that support alternative models for how disciplines work together, how they work with communities, and how researchers are rewarded.

***Edward Jackson is Associate Dean*** (Research and Graduate Affairs) in the Faculty of Public Affairs at Carleton University. Jackson argues that to create social and environmental value and solve social problems in a cost-effective and sustainable way, Canadian universities need to align their capacities with the social innovation agenda and establish effective partnerships with their communities.

***Please enjoy the September issue*** of the OSBR.ca and share your reactions by writing our editor at [dru@osbr.ca](mailto:dru@osbr.ca).

**Tony Bailetti**

**Guest Editor**

*Tony Bailetti holds a faculty appointment in both the Department of Systems and Computer Engineering and the Eric Sprott School of Business at Carleton University, Ottawa, Canada. Professor Bailetti is the Director of Ontario's Talent First Network, the Director of the Technology Innovation Management program offered by Carleton University, and the host of the TIM Lecture Series.*



*“This is not just a matter of giving a laptop to each child, as if bestowing on them some magical charm. The magic lies within – within each child, within each scientist, scholar or just-plain-citizen-in-the-making. This initiative is meant to bring it forth into the light of day.”*

Kofi Annan,  
Former UN Secretary General

The One Laptop Per Child Foundation (OLPC, <http://www.laptopgiving.org>), founded by MIT professor Nicholas Negroponte and a team of educators, developers and technologists, was launched in 2005 to design, manufacture and distribute laptop computers that are affordable enough to provide every child in the world with access to new channels of learning.

Known as the XO, the little green-and-white US\$188 laptop has since gone on to introduce computer literacy and self-empowered learning to children in countries and environments previously considered inaccessible. It's also an example of social innovation, where companies like Nortel are leveraging novel approaches—including open source software development—to drive change that will benefit society.

### Company and Open Source Interaction

Nortel, a recognized leader in communications technology and solutions, is a founding sponsor of the OLPC initiative. In addition to helping children in emerging nations gain access to the valuable learning opportunities technology can offer, our contribution to OLPC and the XO laptop is helping Nortel research and development (R&D) teams think differently to address challenges that may have a broader application elsewhere in the industry. While not a Nortel product, XO is being used as a tool to stimulate our R&D teams to consider new communication models.

These models support the growing trend of Hyperconnectivity (<http://www.hyperconnectivity.com/>), explore new technologies, and contribute to new programming models, including open source.

XO is the first computer created as an educational aid for children in developing countries, where close to two billion children are inadequately educated or receive no education at all. As such, the XO computer is designed to be simple for children to use, even in harsh environmental conditions and outdoor classrooms. To accommodate areas where the availability of electricity is a challenge, XO can be solar charged. It consumes 80 to 90 percent less power than conventional laptops, is fully water resistant with a rubber-sealed keyboard, and has a high-resolution screen that can be easily read in direct sunlight. Also, the XO is based on a mesh wireless network that turns each laptop into a router that allows for easy Internet access.

One of the most significant attributes of the XO is that it was designed to run on open source software (OSS). Indeed, the open source technologies in the OLPC laptop address many of the challenges faced by those deploying connectivity in the developing world. These include: i) sparse technology infrastructure addressed through the laptop's wireless mesh networking capability; ii) limited available electricity offset by the laptop's ultra low-power usage; and iii) the lack of trained IT personnel, a challenge overcome by the XO's simplified software and automatic configuration capability.

Nortel has recognized the growing importance and impact of open source for many years, embracing OSS in many ways, including using open source in several of its products.

Nortel recently acquired PingTel (<http://www.pingtel.com/>), an open source pioneer in enterprise communications. Nortel, PingTel and developers around the world are members in SIPfoundry (<http://www.sipfoundry.org/>), a not-for-profit whose mission is to promote and advance Session Initiation Protocol (SIP)-related open source projects. Nortel's Software Communications System 500 (SCS500) is based on open source from SIPfoundry, and blends the best of both the open source framework and Nortel's expertise in voice, data, multimedia and unified communications.

Nortel is one of many contributors enhancing the open source capability of the XO laptop. For example:

1. Nortel is a sponsor of the Open802.11S project (<http://www.open80211s.org/>), which is producing an open source version of the mesh networking protocol used by the XO laptop. This networking software was not open source, which has been seen as an impediment for the OLPC. By making this software part of the open source Linux kernel, it can be used in off-the-shelf computer hardware to create servers used in OLPC school-based deployments. The availability of a high-quality open source reference implementation will accelerate the creation and adoption of the standard, which will make low-cost mesh networking widely available.

2. We're helping OLPC analyze and address performance issues experienced with scaling the OLPC wireless mesh networking subsystem. Nortel has created an OLPC networking lab in its Ottawa, Canada facility and has engaged a team of Nortel developers to address these issues. We have developed a large number of test cases and are committed to making this testbed available to other open source developers to use when working on mesh networking-related problems.

3. Nortel has sponsored an external research project at the University of Sfax in Tunisia to foster the participation of students and professors in the development and testing of the XO software and wireless mesh networking.

4. We're collaborating with the OLPC core software team to augment their Bitfrost (<http://wiki.laptop.org/go/Bitfrost>) security implementation to include more of the architectural pieces envisioned in the Bitfrost security architecture. This architecture breaks new ground in computer security and addresses some of the key concerns encountered when deploying the laptops in areas without a trusted information and communications technology (ICT) infrastructure.

5. Our LearniT initiative (<http://www.nortellearnit.org/>) is partnering with Curriki (<http://www.curriki.org/>), an online environment created by Sun Microsystems, to support the development and free distribution of world-class educational materials. This alliance provides a free forum for creating and sharing online instructional materials that integrate the latest digital technologies. For example, a teacher can bring to life a traditional lesson plan on the science of weather through digital satellite imaging, showing students how weather systems interact globally. The teacher can then upload the lesson plan, making it available to any teacher anywhere. LearniT also supports the OLPC community by sponsoring and hosting user group meetings. These grassroots events have been organized in cities like Ottawa and Washington, DC by those interested in the open source aspect of the XO laptop.

### Open Source and Social Innovation

The XO laptop is just one example of how open source development is being used to address important social needs, such as education. Other examples include:

1. MIT offers Open Courseware (<http://ocw.mit.edu>) with the motto “Unlocking Knowledge, Empowering Minds.” MIT has made the course materials freely available under the terms of a Creative Commons license agreement (<http://creativecommons.org>).

2. Worldbike (<http://www.worldbike.org>) is using open source mechanisms to improve the transportation and, by extension, the income-generating capability of families in developing countries.

3. The open prosthetics project (<http://openprosthetics.org>), focused on producing useful innovations in the field of prosthetics, freely shares designs to speed up innovations in this industry.

OSS is an important technological, social, business and economic phenomenon that has been called by industry consulting firm IDC “the most significant all-encompassing and long-term trend that the industry has seen since the early 1980s.” (<http://www.idc.com/research/viewtoc.jsp?containerId=202511>). As a social phenomenon, open source development is highly distributed, with contributions from developers around the world. Without a binding contract between leaders and developers, large voluntary organizations still emerge to build sophisticated software that meets a shared goal. And even though any developer can take the current code base and create an independent fork or code branch, this rarely happens.

According to a November 2006 EU study (<http://ec.europa.eu/enterprise/ict/policy/doc/2006-11-20-flossimpact.pdf>) on the economic impact of OSS, the OSS-related share of the economy could reach 4 percent of European GDP (gross domestic product) by 2010. Beyond the obvious business benefits, open source development has the potential to trigger important global change.

Consider that OSS can help drive economic and other improvements. There is a well-known correlation between connectivity and economic growth. For example, for each 1% increase in mobile penetration, per-capita GDP grows by US\$240, and for each 1% increase in Internet penetration, per-capita GDP grows by US\$593 (<http://tinyurl.com/4gqllh>). A recent article in Communications of the ACM (<http://portal.acm.org/citation.cfm?id=1378710>) makes a plausible case for the correlation between connectivity and economic development. Quoting a World Bank official, the article states “(Connectivity) enhances employment, pushes up incomes, increases the employment of women, creates efficiency in government services, and reduces corruption.” Widespread connectivity is also associated with:

1. A reduction in the migration of the poor to congested cities, thus improving the lives of both rural and urban residents.
2. Improved agricultural economics by communicating market prices and bridging the gap between agricultural experts and local farmers.
3. Improved rural health care by reducing barriers to the access of health information and overcoming illiteracy barriers.

Open source development can provide more capability to more people at a lower cost.

In its 2003 E-Commerce and Development Report ([http://www.unctad.org/en/docs/ecdr2003\\_en.pdf](http://www.unctad.org/en/docs/ecdr2003_en.pdf)), the UN notes that “there is no Moore’s law for software. While computing power falls rapidly in price, software that can make use of that computing power becomes more complicated, sometimes more expensive and less reliable, and almost always more difficult to configure and maintain.”

The report concludes that open source can help address this problem.

Eric Von Hippel's 2005 book *Democratizing Innovation* (<http://web.mit.edu/evhippel/www/democl.htm>) made the case that many commercially significant innovations are created by the end users of products. For example, it is difficult for designers in a lab setting to intimately understand the detailed requirements of an educator in the developing world. By relying on available OSS, these educators can now contribute their own enhancements and innovations, which can be incorporated into new versions of the product.

In a very fundamental way, the availability of OSS empowers learning in a way no book can. Walter Bender, past president of the OLPC initiative, credits the availability of the “view source” button on all browsers – and the free availability of the underlying HTML code – as key to the web's success. In this way, open source demonstrates that one of the most direct ways to learn is to imitate, and leverage, the efforts of others.

### **OLPC and Positive Social Change**

By getting the open source-based XO laptop into the hands of children and teachers in some of the most under-developed parts of the world (including Haiti, Mongolia, Rwanda, Uruguay and Peru), the initiative is helping to drive real and substantive change in the many countries that have signed up to participate in the OLPC project. Uruguay and Rwanda are two examples of countries that were among the first to embrace OLPC and are now seeing the impact.

In August, Uruguay deployed its 100,000th XO computer, almost all of which were Internet enabled. The scene was the Villa García Elementary School near Montevideo, one of the country's largest primary schools.

Uruguay's President presented the 100,000th XO to a six-year-old student. Many of the children captured the moment by turning their XOs around to take their own still pictures or video. In addition to being used as an education tool at the school, XO is also being used to support an anti-smoking school initiative.

In September, at the Kagugu Primary School in Kigali, the national government officially launched OLPC in Rwanda. The ceremony included more than 3,000 students who received their XO laptops. The school was fully prepared for the occasion. The electrical infrastructure had been expanded. Wireless connectivity via Vsat was installed. The Education Minister and a senior science and technology official in Rwanda's President's office both spoke to the gathering of their shared vision of how OLPC can improve education in Rwanda, as well as the country's economy. They also announced that the government will create a fund to support a full XO deployment to all of Rwanda's two million primary school students within five years.

The developing world is not the only beneficiary of the OLPC initiative. Some U.S. school districts, such as Birmingham, Alabama, have also embraced the XO. What's more, the impact of the OLPC initiative extends beyond the benefits associated with education and connectivity. XO has also raised the bar on environmental friendliness. It not only consumes significantly less power than other commercial laptops, XO contains no hazardous materials.

Although the XO laptop and the work of the OLPC Foundation continue to make inroads, the initiative has drawn some criticism both from a technology and a deployment perspective. In some cases, the criticism was valid and served as feedback that has led to improvements in the project. In other cases, the criticism



## INSIDE THE CONSTELLATION MODEL

was leveled based on a comparison with commercial laptops and therefore considered less valid because the focus of OLPC is educational, primarily targeted at developing countries and not for profit, and therefore some tradeoffs in the laptop needed to be made. Regardless, work continues to bring the learning opportunities and other benefits associated with technology to children around the world. For example, the OLPC initiative is being complemented by efforts at Microsoft, which is working to port its XP operating system onto the XO hardware.

For the companies involved, the significance of their involvement in the OLPC/XO laptop initiative goes far beyond hardware and software development. As OLPC states on its website, “OLPC is not, at heart, a technology program, nor is the XO a product in any conventional sense of the word. OLPC is a non-profit organization providing a means to an end – an end that sees children in even the most remote regions of the globe being given the opportunity to tap into their own potential, to be exposed to a whole world of ideas, and to contribute to a more productive and saner world community.”

*John Roese is Nortel's Chief Technology Officer and is responsible for leading the company's R&D strategy and for directing future research across all product portfolios. Before joining Nortel, he held the position of CTO at Broadcom Corporation, Enterasys Networks, and Cabletron Systems. Roese sits on the boards of the One Laptop Per Child association, ATIS and Blade Network Technologies, and is actively involved in the IEEE and IETF, as well as other standards bodies. He has co-authored a number of IEEE standards and related documents. Roese holds a Bachelor of Science in Electrical Engineering (BSEE) from the University of New Hampshire.*

*“In spite of current ads and slogans, the world doesn't change one person at a time. It changes as networks of relationships form among people who discover they share a common cause and vision of what's possible.”*

Margaret Wheatley  
and Deborah Freize

<http://www.margaretwheatley.com/articles/emergence.html>

The constellation model was developed by and for the Canadian Partnership for Children's Health and the Environment (CPCHE, <http://www.healthyenvironmentforkids.ca/>). The model offers an innovative approach to organizing collaborative efforts in the social mission sector and shares various elements of the open source model. It emphasizes self-organizing and concrete action within a network of partner organizations working on a common issue.

Constellations are self-organizing action teams that operate within the broader strategic vision of a partnership. These constellations are outwardly focused, placing their attention on creating value for those in the external environment rather than on the partnership itself. While serious effort is invested into core partnership governance and management, most of the energy is devoted to the decision making, resources and collaborative effort required to create social value. The constellations drive and define the partnership.

The constellation model emerged from a deep understanding of the power of networks and peer production. Leadership rotates fluidly amongst partners, with each partner having the freedom to head up a constellation and to participate in constellations that carry out activities that are of more peripheral interest.

# INSIDE THE CONSTELLATION MODEL

The Internet provided the platform, the partner network enabled the expertise to align itself, and the goal of reducing chemical exposure in children kept the energy flowing.

Building on seven years of experience, this article provides an overview of the constellation model, discusses the results from the CPCHE, and identifies similarities and differences between the constellation and open source models.

## **Canadian Partnership for Children's Health and the Environment**

In 2000, a small group of Canadian non-government organizations (NGOs) started talking about children's environmental health. Coming from a variety of backgrounds such as childcare, public health, and environmentalism, these groups were increasingly worried about the risks posed to children by toxics and other environmental hazards. Yet, no one group on its own had the mandate, skills or resources to deal with this complex issue. They realized there was only one way to address this growing issue: working together. This decision resulted in the creation of the CPCHE, with the aim of working together to create a healthy environment for children in Canada.

The decision to work together led quickly to a slate of thorny questions. How would they set collective goals? Would they have to agree on everything? How could they preserve their autonomy and diversity? Who would be in charge? How could they best leverage each others' talents? The group knew they wanted to create a flexible, lightweight and adaptable partnership, not a heavy new umbrella NGO. With this in mind, they developed the constellation model of partnering.

## **Constellation Model**

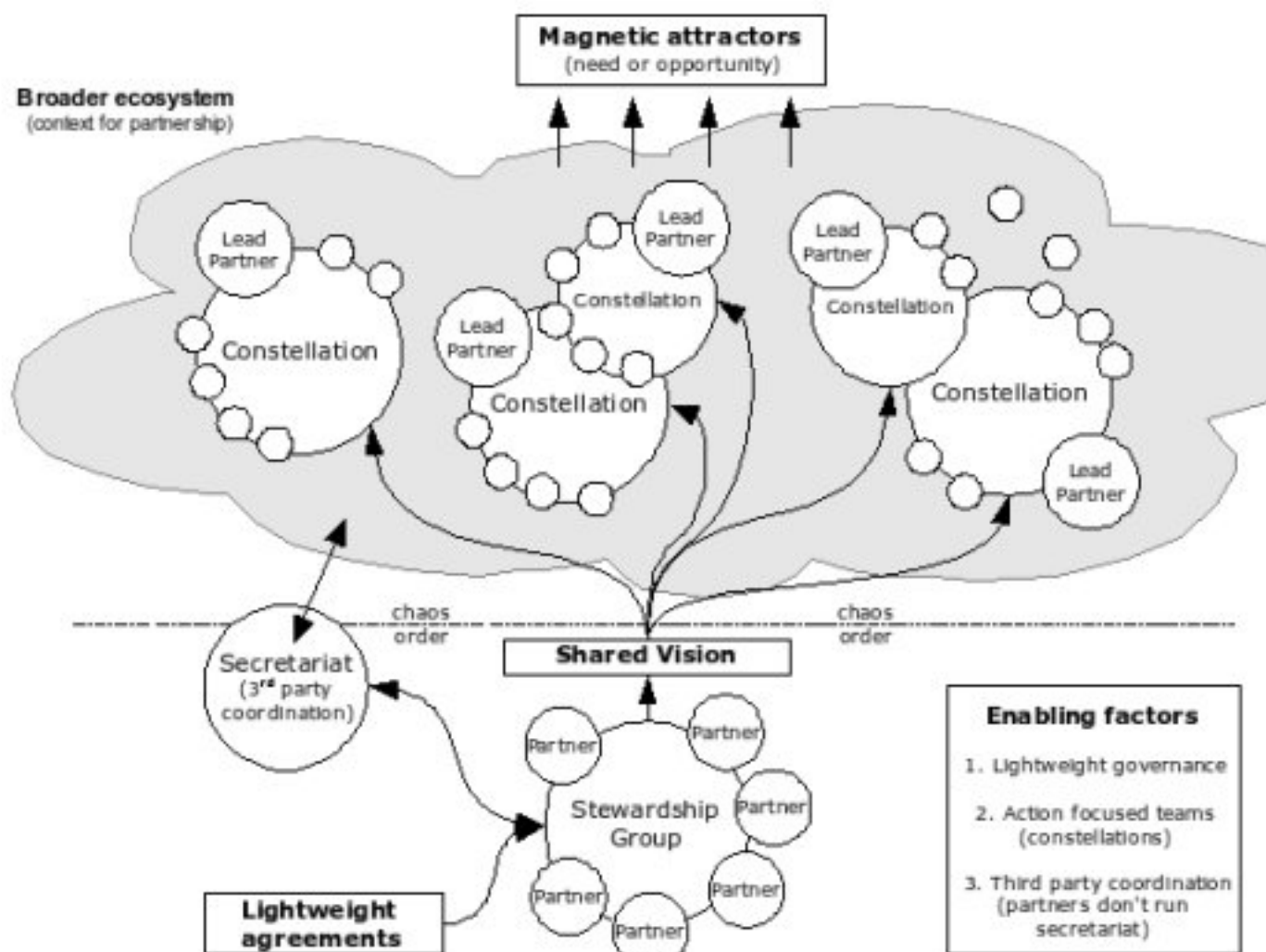
The constellation model is designed to bring together multiple groups or sectors working toward a joint outcome. The focus is on action rather than dialogue. Public education, service delivery, research and other tangible social change activities are handled by small, self-organizing teams called constellations. These teams are threaded into the overall partnership which is held together using a governance and management framework that balances leadership amongst all participating partners. The aim is not to create a new organization, but to get things done in a nimble, high impact manner.

Figure 1 (on the next page) shows the main components of the constellation model. Key to the success of the model are: lightweight governance, action focused teams and third-party coordination. These three elements make it possible to respond quickly to new ideas while still working on more protracted issues and preserving organizational autonomy within the collaborative. Partners apply the principle of emergence, listening for new opportunities that relate to the primary strategic work of the group. The constellation structure allows them to respond quickly to these opportunities, to only engage with the activities that matter to them, and to stay away from activities that don't align with their interests.

Constellations are not a monolithic set of integrated projects, but rather loosely coupled coordinated initiatives. This loose coupling is central to maintaining autonomy while ensuring that the group is moving towards its strategic goals.

# INSIDE THE CONSTELLATION MODEL

**Figure 1: The Constellation Model**



## Lightweight Governance

A constellation-based partnership is created in response to a need or opportunity that begs attention. This need or opportunity is described as a magnetic attractor. Its draw will determine the level of priority that the partners will give to the work of the partnership. It will determine the level of energy and initiative taken, as well as the scope of work and the circle of partners who choose to join in.

For CPCHE, the initial magnetic attractors were the need to raise awareness and mobilize action around toxic exposures and children's environmental health. In particular, the group wanted decision-makers, service providers and caregivers to understand the pressing need to address both well known threats such as use

of lead jewellery and emerging threats such as biphenol A in plastic baby bottles. Although organizations were trying to work on these issues individually, it was clear that they were competing with each other for scarce resources and that their actions were uncoordinated. This resulted in confusion and limited impact.

Once the group was formed around the magnetic attractor, they needed to quickly form a stewardship group, known as a coordinating committee, to serve the broader collective vision. In small partnerships, this group can be composed of representatives from each of the partnering organizations. In larger partnerships and networks, it may be made up of well-trusted members of the broader group who voluntarily step forward.

## INSIDE THE CONSTELLATION MODEL

However this group is defined, its members act as stewards of the community interest and the work that is being undertaken in relation to the magnetic attractor, and not as representatives of their organization's interests. Each organization will be able to pursue its self-interests through the constellations.

The stewardship group is responsible for the overall health of the partnership and ensuring that constellations are aligned with the purpose of the partnership. In CPCHE's case, this work started with the creation of three key documents. The first document provided a set of guiding principles and defined the magnetic attractor that the group would focus on. It stated: "... all children and adults have the right to know about proven and potential hazards to their environmental health and safety." The second document provided governance terms of reference including a partnership agreement and framework to guide how the partners will work together. The third document was a strategic plan that articulated overarching goals related to changing practices of parents and childcare workers and shifting policy to protect children. The three documents provided a framework to support clear action on behalf of the partners.

### Action-Focused Work Teams

Constellations can be formal projects, opportunistic initiatives, or working groups that guide particular aspects of the work of the partnership. While they are focused around practice and the specific interests of members, they must also be consistent with the overall vision and plan of the partnership. Two elements are needed to create a constellation: i) a need or opportunity; and ii) energetic leadership by one or more partner.

When a constellation starts up, the participating partners define terms of reference. What are their goals? How do they want to work? The group also discusses who amongst them should provide the energy to play a leadership role, who has the organizational capacity to be the financial lead and what role each of the members will play. Roles and responsibilities are matched with the assets of each group. Leadership moves from partner to partner, as does any potential funding that may be associated with the constellation.

Constellations have a number of characteristics that make them different from traditional committees. They privilege initiative takers over position and authority. Money and responsibility are spread around. When the need or opportunity has been met, constellations can be creatively destroyed or wound down. As each constellation is permeable -- groups can leave or join at will -- there is a natural pressure to remain relevant. Also, they are meant to be small pieces of a strategic whole, weaving together a bigger picture of the partnership within the ecosystem.

Between 2001 and 2008, CPCHE began over 15 different constellations anchored around issues such as pesticide by-laws, promoting awareness amongst health and child care workers, and monitoring toxic substances, mercury, consumer products, and lead exposures. More than half of the constellations created have been phased out because the goals have been achieved or there is no longer energy. Clearly, this approach has allowed the partners to galvanize quickly around a specific issue and then to disband when the issue has been addressed or when the energy of the group wanes. This has happened without disrupting the vision or stability of the overall partnership.



# INSIDE THE CONSTELLATION MODEL

## Third-Party Coordination

When non-profits set up collaborative projects, they typically house the secretariat function within one of the partners, usually the partner with the most capacity. However, placing the coordination function within one of the partners completely and permanently alters the power dynamic of the group. When one partner takes power, the others defer responsibility and many partners lose energy and motivation.

With the constellation model, the secretariat or coordination function resides outside of the core partners. Staff are either consultants or work for a third party intermediary organization. These people should be familiar and interested in the nature of the collaborative work, but should not have a seat at the table as a content provider. Their job is to support the process of the collaboration by guiding the planning process, facilitating meetings, supporting new constellations, fundraising for joint projects, mediating conflict, helping information to flow, and building the overall capacity of the group to work towards their desired outcome.

At the core of the secretariat is at least one person committed to helping the group along. This is not a junior coordinator position as a highly skilled and discriminating person who embodies collaborative leadership is required. Effectively, this position is the Executive Director of the partnership, but with a focus on process rather than content. Their purpose is to support the content experts who are drawn from the organizations that make up the partnership. This person must strike a balance between driving the group process forward with nurturing leaders from the partner organizations.

In the constellation model, fiscal and legal responsibility moves around in order to avoid creating a new organization. Constellations drive the model: leadership and resources for these constellations are constantly coming from different places and going to different organizations. The member managing a particular project takes legal and fiscal responsibility for that project. This 'in motion' money and power management ensures that active partners are compensated for their initiative and makes it less likely that the money and power will pool in one partner. It is the role of the secretariat, in concert with the stewardship group and the funding community, to balance the flow of leadership and money. The secretariat must have a commitment to building the capacity and involvement of the less active members.

One challenge with the lack of incorporation is the ability to amass core funding to pay for the secretariat. Most grant funded organizations cover these costs by charging an overhead fee. However, with no grants going directly to the partnership as a whole, there is no overhead fee to serve this purpose. CPCHE's solution was to allocate a portion of the administrative fees from each grant that the partners received to the running of the secretariat. In a case where standard overhead fees are 15%, 10% was retained by the lead partner and 5% allocated to the running of the partnership itself. This ensured that, over time, some unrestricted income is accumulated to be used at the discretion of the stewardship group to serve the collaboration. Initially these funds were held in trust by one of the partners. Now, the trust fund sits with the Centre for Social Innovation (<http://www.socialinnovation.ca/>) in Toronto, an organization that is in the business of providing third-party support services for initiatives like CPCHE.

## INSIDE THE CONSTELLATION MODEL

The constellation model can not work without the Internet. Tools like e-mail lists, tracking changes in documents, and a shared web site are critical to facilitating collaboration amongst the group. Collaboration happens at meetings, online, and over the phone between meetings. The 'space between' is especially critical in making sure that the group is fully informed and engaged.

### Results and Challenges

The constellation model has created a resilient ecosystem in Canada comprising more than 1000 thought leaders and service providers who work on children's environmental health issues. There are provincial collaborations on children's environmental health emerging in the provinces of Alberta, Nova Scotia and New Brunswick. There are new links amongst industry, government and NGOs as a result of CPCHE's collaborative approach to policy consultation. This network mesh represents an important asset for addressing the environmental threats to children in the coming years.

There are a number of easy to identify achievements. Partners: i) implemented a model they designed seven years ago; ii) collectively raised \$3 million for children's environmental health work, and leveraged millions more of in kind resources; and iii) produced a number of important publications on environmental health risks for children, ranging from research on the control of toxic substances to accessible plain language guides that help parents and daycare workers keep children safe.

Harder to measure achievements are also evident. First, application of the model resulted in an observable shift from competition to collaboration, both amongst the partners and within the broader children's environmental health space.

Second, CPCHE's work has influenced changes to the Pest Control Products Act, the Chemicals Management Plan for Canada, and the Mandatory Core Guidelines for Health Promotion in Ontario. It helped shape the debate around the new Canadian Environmental Protection Act and sparked discussions about reopening the Canadian Hazardous Products Act. In April 2008, the Minister of Health announced a ban on bisphenol A in baby bottles. He articulated that the government would use a precautionary approach in its review of chemicals through the Chemicals Management Plan. This sparked a market transformation which has seen a near disappearance of bisphenol A in products sold in Canada. It has also set a precedent for banning a substance. This decision is a direct result of the work of CPCHE's talented partners and its powerful approach to social change. The breadth of knowledge and diverse constituency represented by CPCHE partners has been central to this success in the realm of policy.

Third, CPCHE has helped improve practices on-the-ground amongst health and day care workers. Over 1500 health and child care workers have attended CPCHE health promotion workshops where they learn about environmental risks to children and ways to avoid these risks. As a result, more people working in health care are paying attention to environmental risk factors for children.

The partnership has struggled at times. The most significant challenges have been around capacity and speed. Building the capacity of all the partners to contribute in a meaningful way is essential. Special effort was needed early on to ensure that smaller partners had the ability to play as equals in the group. There is now an element of group readiness to create constellations. However, it took a lot longer than was expected to get the group to this point.

# INSIDE THE CONSTELLATION MODEL

## Open Source Comparison

Over the past few years, we have seen an increasing number of efforts to draw the experience of open source into new domains. Work in areas like open educational resources build upon the open source approach quite literally, encouraging teachers to openly license, share and remix educational content. Efforts in areas like open philanthropy are less literal, drawing more on the ethos and practices of open source and less on the idea of producing open digital artifacts.

The constellation model falls in this second camp, drawing inspiration from open source. Some of the elements that the constellation model shares with open source include:

1. Action teams come together to achieve a goal based on mutual self interest where the balance between community and self drives peer production.
2. Clear but lightweight coordination structures ensure that individual and organizational energies align towards achieving the greater goal.
3. Meritocracy is balanced with inclusion as the best ideas and approaches rise to the top and are strengthened by the expertise of the community.
4. Individuals and groups get in or out at any time based on their own interests and needs.
5. Leadership and community health are valued.

The main differences are:

1. The constellation model focuses on promoting social values while the open source model focuses on digital assets that can be distributed under open source licenses.

2. The lack of focus on digital assets means it is not easy to fork a team. The right to fork is not only missing, it would be antithetical to the need to coordinate activities towards the magnetic attractor.

3. The constellation model draws teams from partner organizations in an ecosystem while the open source model draws individuals from anywhere.

The links between open source thinking and the constellation model are not accidental. A number of people involved in the early design of the constellation model were involved in open source projects. The constellation model intentionally drew on the practices of open source from its inception.

## Conclusion

The CPCHE collaboration happened in a high impact and relatively nimble fashion which is not typical in social mission partnerships. CPCHE used open source-like organizing to move the market in toxics and chemical safety, having a direct effect on policy in Canada and ripple effects globally. It has also built a lasting network of people committed to children's environmental health.

The constellation has the potential to help organizations solve concrete problems within the context of a rapidly changing, complex social issue ecosystem. Other organizations like the Ontario Non-profit Network (<http://ontariononprofitnetwork.ca/>), Front Line Partners for Youth (<http://www.socialinnovation.ca/community/members/frontline-partners-with-youth-network>) and [telecentre.org](http://telecentre.org) are now experimenting with the model.

The CPCHE constellation example shows that we can maintain organizational independence and collaborate effectively with others. This is the way we need to work to drive social innovation.

# NEW ECONOMY OF ENGAGEMENT

*This article was adapted from Listening to the Stars: The Constellation Model of Collaborative Social Change published in the first edition of Social Space, a journal published by the Lien Centre for Social Innovation at the Singapore Management University.*

*Tonya Surman is the founding Executive Director of the Centre for Social Innovation. She was the co-creator of the constellation model for CPCHE as its founding partnership director. Her work at the Centre is focused on catalyzing collaboration and entrepreneurship for social innovation. Previously she has run a social enterprise offering e-mail to activists and an edgy online news hub for Canadian progressives.*

*Mark Surman is in the business of connecting things: people, ideas, everything. A community technology activist for almost 20 years, Mark has just become the Executive Director of the Mozilla Foundation. Previously he was an open philanthropy fellow at the Shuttleworth Foundation in Cape Town. He serves as senior partnership advisor to telecentre.org, a \$27 million program that invests in grassroots computing networks around the world. When he has time, Mark likes to write and convene conversations about all things 'open' in his hometown of Toronto.*

## Recommended Resources

Ralph Stacey's Agreement & Certainty Matrix  
[http://www.plexusinstitute.org/edge/ware/archive/think/main\\_aides3.html](http://www.plexusinstitute.org/edge/ware/archive/think/main_aides3.html)

Social Innovation Think Pieces  
<http://www.socialinnovation.ca/ideas/think-pieces>

*"The global epoch we have now entered will embrace many forms of wisdom and dialogue, or it will not be. While humans must continue to build on previous accomplishments, this new, global age must also rise to the challenge of creating better and more effective forms of civic and social engagement to solve problems on a world scale. It must create synergies among the living [forms of] knowledge of people from all parts of the world."*

Introduction to Social Analysis Systems

<http://www.sas2.net/index.php?page=introduction>

Open source technologies and social innovation have emerged at a time when it is critical to adopt inclusive, creative, multi-disciplinary approaches to solving complex social and environmental problems. This article examines the relationship between open source, social innovation and engagement. It reviews four areas where their interplay has afforded organizations working in the (mainly Canadian) social sector with new tools and approaches to managing change. These tools include: i) collaboration and learning platforms; ii) social networking programs; iii) resource allocation websites; and iv) advocacy tools.

An examination of two organizations leading social change in Canada suggests that to address society's larger problems, social innovators must also make use of economic incentives, facilitated or hosted conversations, and partnerships. Finally, two areas where innovation is urgently needed are identified as sustainability education and the means by which we participate in democratic processes and government decision-making.

## A Challenge Unlike Others

We are present at a time of two profound and linked crises.



One is environmental, marked by humanity's unsustainable utilization of earth's natural capital. The second has been termed a crisis of the human spirit, evident in our addiction to material culture, and the concomitant erosion of a sense of connection and belonging, of shared values, or of place and purpose. On one side we have extreme weather events linked to climate change, like Hurricane Katrina. On the other, there's the uncomfortable realization that the values upon which our society operates may be less than optimal for our long term survival—witness the recent unraveling of the US financial system.

Since any economy is a relationship between people and the earth, it is time to commit to learning to live like we plan on staying here. In paleobiological terms, we have entered a period of punctuated equilibrium, when our species must adapt and evolve speedily in light of changed circumstances, or else fall into precipitous decline. We argue that the notion that we can leave this to government, the free market, science and technology, or even civil society is obsolete. Imagining and shaping a future that is equitable, inclusive, sustainable and beautiful has become everyone's charge.

By offering a growing array of new tools and approaches to our most intractable problems, open source principles and social innovation are introducing adaptive capacity into large-scale systems from health and education to agriculture and urban design. We are not speaking of a panacea, however. The work of deepening our commitments to one another and of co-creating healthy futures for all is generational in scale and buffeted by countervailing forces. For the innovations discussed in this article to have enduring and transformative impact, they need to be understood as preliminary steps in a larger shift towards an ongoing culture or economy of engagement.

## Open Source Plus Social Innovation = Engagement

For the purposes of this discussion, we go beyond source code and define open source as non-proprietary design and decision making and management processes that accept ongoing improvements reflecting different perspectives, capacities, approaches and priorities.

By enabling horizontal (peer-to-peer), vertical (up-down and down-up) and reciprocal engagement, open source principles and methods enable large numbers of people from different disciplines to work together to solve the myriad unexpected problems that surface in large scale projects.

Social innovation, to use Frances Westley's definition, is "an initiative, product or process that profoundly changes beliefs, basic routines, resource and authority flows of any social system in the direction of greater resilience. Successful social innovations have durability, impact and scale." **[Editor's note:** this definition is to appear on <http://www.sigeneration.ca>].

An example from the world of moviemaking illustrates the symbiotic relationship between open source, innovation and engagement. In 1995, Pixar released *Toy Story*, the world's first computer-animated feature film. Eight other features have followed, all of which have been blockbusters. Pixar's approach to making films differs markedly from other studios, and is centered on getting people from different disciplines, and at different levels in the organization, to treat one another as peers. Pixar's three operating principles are:

1. Everyone must have the freedom to communicate with anyone.

2. It must be safe for everyone to offer ideas.

3. Stay close to innovations happening in the academic community.

While the first two principles may seem self-evident and highly engaging, the third is unexpected and raises questions about open source knowledge creation and intellectual property rights. Today, when inventions build on the work of many others, having to deal with multiple patent owners can suppress innovation. For Pixar, the relationships it nurtures and the talent it attracts by openly publishing its technological breakthroughs reinforce the company's commitment to the principle that "technology inspires art, and art challenges the technology." (<http://tinyurl.com/4kg2zd>).

Something similar happens when open source tools are applied to the social sphere: technology inspires social innovation, and social innovation challenges technology. In addition to generating new approaches to existing problems, beneficial outcomes include transfer to other domains, and to new levels of scale. At each step in those processes, more people become engaged, and what once seemed impossible or implausible becomes common practice. Thus, engagement is a means of producing, disseminating and embedding social change.

## Innovative Tools for Social Innovation

Here are four clusters or categories of tools for social innovation that demonstrate considerable overlap with open source methodologies. Since social innovation that is collaborative takes place using both open source and proprietary platforms, reference is also made to proprietary software products.

**1. Collaboration and learning platforms:** platforms for learning and collaboration create cerebral networks that amplify our human capacity for managing complexity. Linux (open source software development) and Wikipedia (open source knowledge sharing) harness the power of many minds to build accessible global resources. Thousands of organizations use similar means to build on-line communities of practice, employing feature-rich websites or programs. An example is <http://www.onefish.org>, a global community of fisheries biologists.

With such tools, civil society organizations are able to manage collaborations that until recently would have been too time consuming or simply unaffordable. In 2007, Community Foundations of Canada used Sharepoint (<http://en.wikipedia.org/wiki/SharePoint>) to coordinate the production and release of Vital Signs (<http://www.signesvitauxcanada.ca/>), a collection of report cards on quality of life indicators in 11 cities as well as a national report synthesizing the results.

Such platforms are environmentally important, in that they reduce the necessity for face to face meetings, while adding value to meetings when they do occur. Conference organizers are finding websites like Wordpress (<http://www.wordpress.org>) helpful for posting speaker biographies and presentation notes. Survey Monkey (<http://surveymonkey.com>) puts powerful polling ability into the hands of everyone.

**2. Social networking websites:** Facebook and YouTube, while not open source platforms themselves, have become essential tools for social activists, providing local to global networking and communications capacity at low cost. Leading social innovators are developing new ways to apply social networking technology to organize activities in the real world.

# NEW ECONOMY OF ENGAGEMENT

The Plan Institute in Vancouver (<http://www.planinstitute.ca>), for example, is developing Tyze (<http://www.tyze.com>), which enables caregivers to organize an online support network.

Looking for people in Calgary who share your interest in medieval tapestries? Meetup's (<http://www.meetup.com>) tag line is 'use the internet to get off the internet' and is used by people to find others with shared interests. Such innovations are building new social capital and counter Robert Putnam's thesis that we are becoming a society of people 'bowling alone' (<http://bowlingalone.com>).

The challenge of connecting on-line activity to social change in one's own community, and around the world, is one that Taking IT Global (TiG, <http://www.takingitglobal.org>) is exploring. With a global presence, it provides opportunities and learning about youth engagement in social and environmental issues, using a suite of continually updated tools and forums. There is significant potential for platforms like these to become increasingly important in our schools. Interestingly, TiG has found that adding an in-person complement to its on-line gatherings has a powerful catalytic effect on engagement and collaboration.

**3. Resource allocators:** a leading Canadian innovation in this area, Canada Helps (<http://www.canadahelps.org>), enables the public to make on-line credit card donations to any one of 83,000 registered charities, and receive their tax-creditable receipt immediately. Canada Helps is a non-profit and deducts a 3% fee to cover credit card processing charges and its own costs which are far below the usual costs of fundraising.

Kiva (<http://www.kiva.org>) is about micro-finance, not charity.

As the first globally accessible web platform of its kind, it builds on Mohammed Yunus' original idea to enable anyone in the world to make loans of as little as \$25 to a pre-screened portfolio of projects in developing countries ([http://en.wikipedia.org/wiki/Muhammad\\_Yunus](http://en.wikipedia.org/wiki/Muhammad_Yunus)). Interest paid by borrowers is used to finance the work of local and regional project assessors. Lenders do not receive interest beyond the satisfaction of knowing that they have helped a micro-entrepreneur in the developing world--and 99% of loans are fully paid back.

**4. Advocacy tools:** Canadians of varied political stripes cheered recently when Green Party leader Elizabeth May was admitted to the national leadership debates. An on-line petition had gathered close to 100,000 names in a few days. As a tool for direct democracy, in which citizens are able to communicate their views to politicians, this is similar to polling, which takes a snapshot of public opinion at a particular moment. A leading formulator of on-line petitions is Avaaz (<http://www.avaaz.org>), which has had a discernible impact on a number of environmental and human rights issues.

These four clusters of activity exemplify the symbiotic relationship between tools for social innovation that are closely tied to open source technologies. Essentially, they make engagement easier by providing a substitute for letter writing, swiftly managing donations, or reducing logistical barriers to collaboration. The cost of entry is not onerous in terms of time or financial resources, and the tools consistently fulfill their promise.

## Making a Difference

The question arises whether these innovative tools, and their continuous improvement in open source communities, are sufficient in and of themselves to constitute or engender larger social shifts.

## NEW ECONOMY OF ENGAGEMENT

In effect, this is to ask whether the tools are driving social change or whether other factors are involved. We can deduce the answer by examining the work of two leading social innovators which are grantees of The J. W. McConnell Family Foundation: the PLAN Institute of Vancouver (<http://www.planinstitute.ca/>) and Toronto's Framework Foundation (<http://www.frameworkfoundation.ca/>).

PLAN Institute's goal is to reduce the insecurity, isolation and loneliness of people who are marginalized by disability, according to the principle that everyone has a duty to contribute. Social innovations extend to the aforementioned Tyze program and introduction of Registered Disability Savings Plans (RDSP) at the federal level. PLAN is working to create public policy and financial instruments to deliver RDSP's in every province. The result will be fundamental and potentially far-reaching changes to resource flows in support of vulnerable individuals and families. PLAN also hosts a reflective dialogue on the nature of citizenship and is collaborating with institutional partners in the Social Innovation Generation initiative (<http://www.sigeneneration.ca>), to open new space for social innovation in Canada. In its combined use of economic instruments, reflective dialogue and collaboration among unlikely partners, PLAN's work presages the shape of social innovation to come.

A similar multi-disciplinary, participatory approach is evident in research and policy initiatives like Sustainable Prosperity (<http://www.sustainableprosperity.ca>) which is linking academics in various fields with economists and leaders from business, government and civil society to introduce ecological fiscal reform in Canada. Similarly, Causeway (<http://www.socialinvestment.ca/documents/TimDrainin-Causeway-SIO-Final-070528.ppt>) is building a marketplace for social purpose capital.

Toronto-based Framework Foundation is fostering a volunteer ethic among a new generation of young professionals, using a comprehensive and innovative volunteer recruiting and management program. Framework purchases work from emerging artists and organizes public social events where young people learn about and volunteer with civil society organizations, and then bid on the displayed artwork using their pledged volunteer hours.

Framework's operation is scaling up quickly and is managed using new generation web tools. Its ability to engage netizens in face to face social activities leading to community volunteering, while supporting emerging artists, in some ways parallels PLAN's work, inasmuch as it involves incentives, new conversations, and an unusual mix of partners. A further parallel is apparent in Framework's development of an on-line Civic Footprint calculator that enables individuals to track their community involvement the way they would their net worth. Like Tyze, it reflects the principle highlighted earlier, that technology challenges social innovation and vice versa, with a measurable engagement dividend.

Considered together, PLAN and Framework employ strategies in which open source and social innovation increasingly overlap, with results that are generative for their respective domains.

### An Unmet Need

There are two areas where open source and social innovation are needed rather urgently.

One is in education for sustainability. If we are to meet our obligations to the coming generation, to equip them to play an active role in co-creating the world they want, we need to engage young people now, using the web tools with



# NEW ECONOMY OF ENGAGEMENT

which they are familiar, and applying them to a much broader range of imaginative action learning opportunities. The McConnell Foundation's Green Street initiative (<http://www.green-street.ca/>), originally a Web 1.0 platform for teachers to access education programs from Canadian environmental organizations, is currently being adapted to this purpose, employing among other means, closer alignment between environmental and arts education.

A second and even more fundamental place to direct such efforts is towards our practice of democracy. Thoughtful commentators on politics as currently practiced in Canada have pointed out that the means exist for more effective public engagement in public process. Lenihan et al (<http://www.ppforum.ca/en/crossingboundariesgovernanceprogram/>) have demonstrated that new forms of engagement in government decision making would generate better decisions and address public scepticism about governments generally. In place of opinion polling and consultation processes that are prone to becoming competitive processes, they propose deliberative dialogue leading to inform action decisions.

The Government of New Brunswick appears ready to adopt this approach (<http://tinyurl.com/4hv7mo>). Social Analysis Systems, mentioned in the opening quote, offers an open source toolkit for managing collaboration among diverse stakeholders. Treehouse (<http://treehousegroup.org/>), a non-profit public process convenor in Toronto, has a suite of tools designed to elicit 'great ideas from minds that don't think alike'.

## Conclusions

The symbiotic relationship between open source methodologies and social innovation is contributing to a renewal of civic engagement.

In and of themselves however, such tools and processes may not be sufficient to effect systemic change. It is when we add economic incentives, social process tools for public deliberation and decision making, and new collaborations that a new economy of engagement becomes possible. An especially important element in this fruitful equation is the need to continuously link change efforts to work in education and research.

If we are to meet the environmental and social challenges mentioned in the opening paragraphs of this paper, we can hardly afford not to pursue this work vigorously and imaginatively.

*Stephen Huddart is the Vice President of The J. W. McConnell Family Foundation in Montreal. The Foundation's mission is to 'engage Canadians in building a society that is inclusive, sustainable and resilient'. Prior to joining the Foundation, he owned and operated a jazz café in Vancouver, held a variety of executive positions with the British Columbia Society for the Prevention of Cruelty to Animals (BC SPCA), and headed the Troubadour Institute. Stephen holds a Masters of Management degree from McGill University.*

### Recommended Resource

Toward a New Consciousness  
<http://www.environment.yale.edu/newconsciousness>

## KEY ELEMENTS OF SOCIAL INNOVATION

*"Finally, social innovation at scale comes from systems that give the public tools to innovate for themselves. Brokering this transition is what many innovation intermediaries in social innovation are passionately committed to."*

Matthew Horne

[http://www.innovation-unit.co.uk/images/stories/honest\\_brokers\\_final.pdf](http://www.innovation-unit.co.uk/images/stories/honest_brokers_final.pdf)

This article describes four key elements of social innovation: i) social technology; ii) innovation intermediaries; iii) people who drive innovation; and iv) openness. By taking experiences from social technology and examining the impact of "open everything", this article posits the value of innovation intermediaries as critical enablers of success in the emergent field of social innovation.

### Social Technology

The Social Innovation Generation (SiG, <http://www.sigeneration.ca/>) program, launched in June 2007 to spur social innovation in Canada, represents a partnership between the McConnell Foundation, MaRS Discovery District, the University of Waterloo and the BC-based PLAN Institute for Caring Citizenship. It defines social innovation as an initiative, product or process that profoundly changes beliefs, basic routines, resources and authentic flows of any social system in the direction of greater resilience.

Social technology ([http://commons.ca/ideas/social\\_tech/](http://commons.ca/ideas/social_tech/)) enables those most impacted by problems to collaborate with those motivated to provide effective and efficient technology solutions. Achieving any social mission requires regular communication, which can be made possible through social technology.

An example of social technology in action was seen in June 2008 with a hands-on, web 2.0 intensive training session held at the MaRS Discovery District for those engaged in social change (<http://www.marsdd.com/socialtechtraining/proceedings.html>). This Social Tech Training (STT), co-hosted with Communicopia (<http://www.communicopia.net/>), was an opportunity for 60 representatives from a mix of organizations to explore the use of social technology to increase the effectiveness and efficiency of social initiatives. Ricken Patel, founder and Executive Director of [Avaaz.org](http://Avaaz.org), a global online advocacy group designed to "close the gap between the world we have and the world we want", suggested that we are facing a crisis that presents an opportunity for change. Patel sees the crisis as a democracy deficit and the opportunity as a new approach to elicit democratic engagement. He argues that the use of social technology will allow individuals to make a difference.

Complex social issues like poverty and environmental degradation are by no means new, but the global context in which they arise certainly is. The transfer of knowledge, information and news is increasing rapidly every year. With so many competing social concerns, how can audiences be reached and mobilized through the haze of messages and marketing? What is abundantly clear is that the proverbial balance needs tipping and no single sector has all the answers. Given mounting pressures such as an aging population, an under-resourced voluntary sector, and our current global economic situation, the case for social technology is compelling.

Open source approaches have taught us that success can be found in the creation of space for engaging in collective efforts. Enabling people to get involved on their own terms is a radical idea, one that holds the seeds of social innovation.

In social technology, the sum is greater than its parts, and as in most fields, the team is critical to success. The challenge in the offline world is making organizations more flat, so that the sum is not just those decisions made by upper management. In the online world, social technology can offer sites that are rich with online video, photo, sound and graphic capacities to seamlessly present complex stories in a way that works for a variety of constituents.

### **Innovation Intermediaries**

An innovation intermediary is an individual or organization responsible for mobilizing resources to achieve an outcome. Philip Smith, the "Simplifier of Technology" at Community Bandwidth (<http://www.communitybandwidth.ca>), offered the following observation during STT: "At the core of most successful social technology initiatives (are) innovation intermediaries. These are the folks that are in the trenches every day living and breathing everything that is what we understand to be important social technologies — e-mail campaigns, Web services, mobile applications, online fundraising, social networks, etc. — and sharing their experiences out to innovative organizations. These are the circuit riders, the non-profit technology assistance providers and implementers, the civic data libertarians, and the progressive software development providers and developers...we desperately need some of these concepts explored in the Canadian context. Intermediaries are the shepherds that can alter the course of this familiar story."

It is clear, as postulated in Honest Brokers ([http://www.innovation-unit.co.uk/images/stories/honest\\_brokers\\_final.pdf](http://www.innovation-unit.co.uk/images/stories/honest_brokers_final.pdf)), that "innovation intermediaries are emerging in response to a set of barriers that inhibit the relationships between different organizations."

Avaaz.org has attained legitimacy as an innovation intermediary. The technology concept is simple: build a mailing list where subscribers receive alerts "to urgent global issues and opportunities to achieve change." Members are advised on what action to take, which petition to sign, and how much money needs to be raised. Members are polled regularly to determine which issues should be tackled. Supporters guide the parameters of the campaigns which are able to go where most could not due to stakeholder influences. Response is overwhelming and passionate, and the approach has proven extremely successful, with over 3.2 million current subscribers.

In addition to social technology, we need intermediaries who understand and embrace open source thinking to bring about effective social change. Patel describes the innovation intermediary role as servant leadership: working with the people one seeks to mobilize to best reflect their needs and passions as engaged citizens.

### **People Driving Social Innovation**

As in many other emergent movements, a face on a social innovation movement is important. However, social innovators admit that success requires a team of people with a shared vision. Significant change comes through collective action. Who are the people who drive social innovation? According to Avaaz.org, they are aged 15-85 and come from all backgrounds. Youths are energetic, seek careers that provide more than just stable income, are willing to try new approaches, and are equipped with the digital tools to make a difference. They are also supported by experienced people ([http://researchworks.carleton.ca/2008\\_May/240.htm](http://researchworks.carleton.ca/2008_May/240.htm)) who "would like to think the tools we have helped develop will make life easier for the people who want to initiate and grow societal change".

## KEY ELEMENTS OF SOCIAL INNOVATION

This is a new generation of social citizens: global citizens first, Canadian citizens second. They are the peer-to-peer generation. These citizens demand an open source approach to social innovation and a new economy based on "with" instead of "for". The groundswell is very much present and active, it just looks different. Instead of taking to the streets, a whole new generation is taking it online, and therefore, taking it global.

### Open Everything

There is a global movement to "open everything". Lead by some great Canadian and UK thinkers, Open Everything (<http://openeverything.net/>) is holding a series of meetings based on the belief that "Open is changing the game. And, while Wikipedia and open source software offer great examples of what is happening, we know that openness, collaboration and participation are spreading well beyond the realm of technology. At the core, it is about values. Open Everything gathers people who are charting this trajectory."

Can we move to open everything? Can you let go of your hard drive filing system and post everything online like Kris Krug, of Raincity Studios (<http://www.raincitystudios.com/>), allowing him to access all of his data from anywhere in the world? Maybe not, but it is worth keeping tabs on trailblazers like Kris, or better still, to join their discussion and engage with them to critically assess if openness is in fact enabling social innovation.

### Conclusions

Systems transformation is being brought on by demands from donors and youth who understand that there has to be a better way forward. Complexity of the issues we face and mounting economic pressures signify that the time is right for disruptive innovations to flourish.

Social innovation is about communities, and action-oriented teams of people who lead. Join us, to take the best of social technology, innovation intermediaries, people, and openness to change our society for the better.

*Allyson Hewitt is Director, Social Entrepreneurship at MaRS. She established the social innovation program that includes Social Innovation Generation (SiG@MaRS). This program provides social innovators and entrepreneurs access to resources to turn their ideas into positive outcomes for society. Allyson was the Executive Director of Safe Kids Canada and an advocate in preventing injuries to children. Prior to that, Allyson was the Executive Director of Community Information Toronto, an agency that matches people with services. In this capacity, she helped lead the development of 211, providing three-digit and online access to social service, community and government information. For this work she was awarded the HRDC-sponsored Head of the Public Service Award and several other awards for meritorious public service. She has a BA in Criminology and Law, a diploma in Public Affairs and certification in Voluntary Sector Management and Leading Change.*

### Recommended Resources

We-think

<http://www.wethinkthebook.net>

Community Intermediaries Research Project

<http://www.unb.ca/cirp/>



*"The empires of the future are the empires of the mind."*

Winston Churchill

We live in an age where the rapid pace of technological innovation and the ability to disseminate knowledge far exceed our capacity to ensure that all members of society receive their benefits. The challenges in providing access to technology have been largely solved in this globally connected world. How to best use that technology to increase social value and alleviate lack of education, poverty, and other societal problems is an ongoing question with no easy answers.

This article explores the challenges for social innovation and the use of information technology. These challenges are: i) access to technology; ii) access to learning; iii) the use of technology in teaching and research; and iv) the establishment of a framework of knowledge.

### **Access to Technology and Information**

Gutenberg's invention of movable type ranks as one of the most significant technological changes in history, making the printed page accessible to all. Yet, in the 15th century this revolution was not broadly experienced. Making paper and printing books was a laborious process restricting the numbers produced. How many people could afford books and, if they could, how many could read? Nonetheless, this innovation opened the door to mass communication.

Today a similar revolution is occurring. Less than 40 years ago, students were producing theses on typewriters and 20 years ago students could not afford individual computers and worked at rather large, chunky machines in the basement of the library. Today, the majority of students arrive at university armed with laptops, desktops, and text messaging devices.

In the 1980s, a frequent debate at UNESCO centred on the have/have-not countries' access to information technology (IT). Representatives of African and Latin American nations rued investment in IT as they imagined being left even further behind and excluded from intellectual debate. They argued that in rural locations where there was no electricity, one could hardly run a computer. In villages where people did not have money for shelter, food and clothing, how could anyone even dream of sharing email accounts? Yet, today the use of IT circles the globe. In the desert, yurts prominently feature satellite dishes and sidewalk dwellers in Shanghai have laptops even if they have no plumbing. A foundation in India is working to provide computer access to every village.

The challenge today is not so much access to terminals and technology as to content. If the world's population still includes hundreds of thousands of illiterates, then we have only provided partial access. Like Gutenberg, we can produce texts, but if they cannot be read, will they make a difference? Can we employ technology to teach people reading skills? Can we make people literate in mathematics? Just as children's books were developed to teach reading, would it be possible to employ IT for basic knowledge and skills transfer? Further, can we provide access to knowledge in non-textual formats such as streaming voice and video? Could this be done globally, in every language? Could we equalize basic opportunity around the world?

We experience inequality at home as well. Imagine the works of art, the great scientific inventions, the brilliant and inspiring thoughts and texts we are missing today because entire segments of our population in North America have limited education.

Today they might have access to a computer, but we also need to provide learning packages in attractive, usable formats. If we dream of possibilities for the human race, we must include everyone. Only through inclusivity will the potential of humankind be realized.

Nearly 20 years ago, Arthur Cordell proposed a byte tax which could be used to fund global initiatives including the sharing of technology, technical training and skill development, and basic information on issues such as nutrition and health care (<http://library2.usask.ca/gic/v2n4/cordell/cordell.html>). Today leaders like Bill Gates have set up foundations that have the capacity to overcome the financial obstacles to this essential effort and to provide the required education. When the first books were printed, the door was opened a bit to the lights of knowledge and information. Today the door to global knowledge is ready to swing wide open with the technology available. It is our responsibility to be sure there is something behind the door and we must begin with the basics.

### **The Challenge of Discovery and Renewal**

While basic training and education must be a worldwide goal, we must also dedicate our minds to the pursuit of new knowledge. We yearn for the excitement of new discoveries, of worlds beyond our ken in space and time, of tiny particles which have incredible power and are capable of changing our lives, of ways to understand each other and to ensure our planet will still support the life of our grandchildren. To fulfill these desires, we must use technology to its best advantage. We must combine the best scientific and creative minds in every field, challenging them to harness the potential of the tools we now possess, to develop new ones and to employ them not only for teaching and the dissemination of information but for the acquisition of knowledge.

If writers did not continually create new books, architects new designs, musicians new symphonies, scientists new formulas and engineers new technologies, there would be no need for printing presses or IT. The challenge today is not to continue simply creating new masterpieces but to use IT to create masterpieces of a higher order.

Wisdom is the interpretation of information tested over time through experience and checked against a system of ethical values. Today we have the means to bring together interdisciplinary teams of people combining a broad spectrum of knowledge and telescoping years of data collection into mere mechanical moments. We can advance knowledge and solve problems more quickly and more effectively than ever before.

This attractive option is indeed a challenge. How do we surmount the silos created through our highly specialized educations in set fields? How do we bring together people who work in different academic units and how do we find grants to support their work when granting agencies themselves operate in a structured fashion which often tends to replicate the present rather than encourage innovative efforts? How do we traverse international borders and share information with colleagues? How do we overcome the protectionism of patents and copyrights while preserving the ownership of intellectual property?

Reasons for protecting ownership of intellectual property include wealth, power, and peer recognition. Having an idea does not serve an individual scholar, unless it is shared. If it is shared, will anyone lose? In the capitalist model, the first company to develop the idea and the company producing and marketing it most effectively will profit and share profits with the inventor.

If the idea is stolen or if property rights are not respected in the global market, then we all lose because the motivation for some scholars will flag and innovation will slow.

The intellectual sharing model has faculty members offering their discoveries to the world freely. Will scholars be any less motivated to do research if they think they might not strike it rich? One might first ask how many researchers have become truly wealthy and from which discoveries. Why would we want to hide information which might serve our fellow citizens of the world? Why would we not want to work with teams around the world to see those discoveries occur in this lifetime rather than risk not completing the work ourselves? How many authors would prefer to write a book which is never published to one which is published and which inspires lively debate?

The negative answer to all of these questions comes from the source of funding support for research. This determines ownership and demands a proprietary system. If we had international foundations supporting research to be shared globally, we might achieve considerable progress. If the United Nations took on a new role, that of supporting the expansion of knowledge and the sharing of information, perhaps we might change the current paradigm and make significant progress in improving our human condition.

### **Establishing a Hierarchy of Knowledge**

Centuries before Gutenberg, a Chinese Emperor decided to make information available to all his subjects. He created enormous stone stelae on which were etched all the knowledge possessed at that time. The Chinese people could visit this forest of stone and rub the pertinent sections with rice paper, taking home the desired pearls of wisdom.

Unfortunately, most of the people could not read. Even worse, the information contained on these great pillars was not organized and one might spend considerable time locating the appropriate bits of advice. While the search engines of today assist somewhat in navigating the incredible amounts of information available on the Internet, it can still be an enormous task to find relevant and high quality information.

It is commonly accepted that knowledge is power. If so, the organization of knowledge and the advancement of the semantic web will equate to mega-power. Teams of computer scientists and librarians are now linking libraries by the Internet and replicating the references from the card catalog. [Editor's note: This seems to be a new iteration of Vannevar Bush's "As We May Think" ([http://en.wikipedia.org/wiki/As\\_We\\_May\\_Think](http://en.wikipedia.org/wiki/As_We_May_Think)).] An incredible opportunity lies before us to undertake a massive project which would involve teams of scholars from every university around the world.

We now have the opportunity to create a new, inter-disciplinary hierarchy of knowledge which will frame the way people think and perceive problems for generations to come. We have before us the technology and the means to do what many companies are currently vying to accomplish. If scholars from around the world undertake the creation of a new hierarchy of information, they would make a truly powerful contribution to the world.

This is the biggest and most exciting challenge we face today. If we give the people of the world not only the means to access information but exciting paths of entry into its secrets, we can change the world.

This could be the next major technological revolution, transforming the question of access from an economic issue to one of moral and social justice. We are capable of converting information to knowledge and knowledge to wisdom. This is indeed an exciting prospect and a worthwhile challenge.

*Dr. Roseann O'Reilly Runte is President and Vice-Chancellor of Carleton University. She is the author of numerous scholarly works in the fields of French and comparative literature. She has written extensively on economic and cultural development, higher education and the importance of research. In addition, she is a creative writer and has received a prize in poetry from the Académie française. Dr. Runte has been awarded the Order of Canada and the French Order of Merit and is a Fellow of the Royal Society of Canada.*

*"The other driver of innovation is awareness of a gap between what there is and what there ought to be, between what people need and what they are offered by governments, private firms and NGOs – a gap which is constantly widened by the emergence of new technologies and new scientific knowledge."*

Geoff Mulgan, et al

<http://www.youngfoundation.org/files/images/SI-sp.pdf>

Learning and social innovation are linked. Adaptive co-management offers strategies that empower learners to take responsibility, collaborate and create. To improve our understanding of how social innovation is nurtured, we examine three projects that used the adaptive co-management approach to support learners working in autonomous groups to create social goods and fill perceived gaps. The student projects led to the following social innovations: i) an organic food market serving students; ii) an open source approach to design in a field where proprietary approaches are more common; and iii) a model that extends the impact of what first year university students learn well beyond the classroom.

### **Adaptive Co-Management**

Social innovation embraces change as opportunity and proceeds by reflexive and creative processes. It also benefits from social and cultural diversity. If we strive for equitable, just and ecologically viable visions of our collective future, social innovation as a paradigm offers real hope. Our biggest challenge is to figure out how to support and make it happen.

Adaptive co-management is a paradigm of governance, learning and management that builds upon the principles of adaptive management ([http://en.wikipedia.org/wiki/Adaptive\\_management](http://en.wikipedia.org/wiki/Adaptive_management)).



The Resilience Alliance (<http://www.resalliance.org/2448.php>) explains that the "Novelty of adaptive co-management comes from combining the iterative learning dimension of adaptive management and the linkage dimension of collaborative management in which rights and responsibilities are jointly shared. Complementarities among concepts of collaboration and adaptive management encourage an approach to governance that encompasses complexity and cross-scale linkages, and the process of dynamic learning. Adaptive co-management thus offers considerable appeal in light of the complex systems view. In this regard, adaptive co-management has been described as an emergent and self-organizing process facilitated by rules and incentives of higher levels, with the potential to foster more robust social-ecological systems." Adaptive co-management assumes that change is an inherent property of systems, whether the system being considered is social, cultural, ecological or a hybrid.

When referring to cross-scale linkages, scale is used in the sense provided by Margaret Wheatley and Deborah Frieze in "Lifecycle of Emergence: Using Emergence to Take Social Innovations to Scale" (<http://www.margaretwheatley.com/articles/emergence.html>): "As networks grow and transform into active, working communities of practice, we discover how Life truly changes, which is through emergence. When separate, local efforts connect with each other as networks, then strengthen as communities of practice, suddenly and surprisingly a new system emerges at a greater level of scale. This system of influence possesses qualities and capacities that were unknown in the individuals. It isn't that they were hidden; they simply don't exist until the system emerges."

In the context of social innovation, the adaptive co-manager role is about midwifery. The adaptive co-manager guides, supports, and encourages the process of emergence into the world of something new, whether it is an idea, a management arrangement, a decision or any other entity. The adaptive co-manager role enables the process of the actors engaged in engendering. The role may involve undertaking a wide range of activities from the relatively passive to the clearly active. Like a practicing midwife, the adaptive co-manager role provides a safe environment for innovation to emerge that might not survive unaided. However, this role does not pre-determine the content or the nature of that emergent form.

Frequently, the existing regulatory and administrative approaches to solving conflicts involves parties with diverse interests, rights, powers, concerns and agendas. The mechanisms available are often inadequate and inappropriate for these cross-scale situations. In order to bridge social and cultural divides, flexible, negotiated, multi-party strategies are needed. Adaptive co-management can create innovative outcomes under changing conditions because it spans an organisational continuum running from highly formal, rule-rich, goal-oriented governing behaviours to informal, process-focused, visioning creating behaviours. Needs for social innovation speak loudly where change is viewed as both inevitable and desirable.

### **Farmers' Market**

Post-secondary students often aspire to make a difference that transcends the classroom, touching and changing our world. Adaptive co-management is used to understand links between learning and social innovation in the following three student projects.

In the first project, a team of students formed around a broad set of interests in food in response to a class group assignment. Group consensus as to topic and active participation by all in the team was required. Within two months, the students had developed and publically presented a strategy for creating a Carleton Farmers' Market in order to enhance student access to organic foods. This included forming a student club, setting up an email list, inviting producers to participate, offering choices to students, and negotiating with university administrators to meet their goals while respecting existing university contracts and public health regulations. The group became autonomous, operated as a formal Carleton student association club, and continued to develop their ideas through the following winter and summer.

This example illustrates one of the driving forces of social innovation: students identified un-met and emerging needs and then sought new arrangements to address them. They created a new market and exploited new opportunities in the process. Potential for continuing social entrepreneurship appears to be high.

The Carleton Farmers' Market can be thought of as a social innovation that has benefited from application of strategies of adaptive co-management in the classroom, including enhanced autonomy, cross-scale interaction, shared responsibility, inclusion of diverse interests and a flexible learning orientation. Collateral benefits are possible. In this instance, the pleasure of eating organic food had social justice as a collateral benefit.

### **Open Source Architectural Design**

Edward G. Solodukhin positions his architecture project (<http://arch1k.wikidot.com>) in the world of open source:

"The project is an exploration carried out to challenge my architectural master's thesis, which deals with the open source phenomenon and ways in which it could inform today's architectural practice. You are invited to partake in this investigation and explore new ways of exchanging ideas, designing, discussing, building, and transforming the architectural zeitgeist altogether."

This is a student-defined project that applies the open source approach to the field of architectural design. As both a process and product of open source development, this project lends support to an argument for viewing open source conceptually and concretely as a source of social innovation in learning environments. It illustrates that open source is a powerful force capable of creating social innovation in fields other than the software development domain.

### **Breaking the Ice Symposium**

In the third example, first year university students organized the Breaking the Ice Symposium held February 29, 2007 as a class assignment (<http://www.now.carleton.ca/2007-3/1555.htm>). This Symposium involved 29 students, one teaching assistant, one instructor, one co-instructor, and the Office of the Assistant Dean for First Year. Participants agreed to three themes (International Polar Year, Biodiversity, and Sustainability), identified tasks, and developed working groups around all aspects of the Symposium. The Office of the Assistant Dean provided some staff support, and it was agreed that the undergraduate teaching assistant would be the link between the student groups and the staff support. The instructor adopted a mentoring and facilitative role, offering suggestions when asked, but only intervening if specifically requested to do so.

This stance created a space for learning analogous to the space created by the open source architecture wiki: learners were free to contribute, to share resources and to find needed resources.

Freedom came with responsibility to contribute to the Symposium and ultimately to the process of evaluation as a whole. Each student prepared a presentation and sub-groups organised donations of organic food and drink, exhibits, logistics, donations and speakers. During the process building to the Symposium, the students struggled, debated, engaged and solved problems. Collectively they mentored each other and learned about each other's concerns. They became organisers, hosts, managers, and leaders. Most importantly, they continued to pursue learning that began in class well beyond the boundaries of the campus.

In January 2008, former members of the class participated in a panel at the Women's Health Matters Forum in Toronto. For most, it was the second public speaking engagement of their academic careers. Since then, one of the presenters has become a speaker on a northern tourism voyage. A second participant who raised the issue of sovereignty and the environmental impacts of shipping has been employed as a result and sees future opportunities here. These individuals are experiencing a third iteration of their ideas.

### Lessons Learned

Lessons learned about creating conditions supportive of successful social innovation drawn from these experiences include: i) engaging the learners in identifying the gaps that matter to them as well as the responses; ii) providing unstructured opportunities, few rules and maximum freedom for the learners and their processes; iii) demonstrating active appreciation for diversity and initiative; and

iv) structuring format and maintaining clear and inclusive communication strategies.

If we wish to support social innovation in a learning context, we must be prepared to enable learning as a social activity. This means we must structure learning as a social process, allow time in class for social learning processes, encourage open ended questions and support frustration and failure.

Learners own the learning processes that lead to social innovation. They need to define problems as well as develop solutions. As an instructor, respect difference, promote tolerance, keep an open mind, and stay out of the way of social innovation as much as possible. After all, social innovation is about outcomes that are different from our past. As Einstein said: "We can't solve problems by using the same kind of thinking we used when we created them."

### Discussion

When a gap like that described in the introductory quote by Mulgan et al. is identified, choice is possible. If change is the goal, an important strategy is to relinquish authoritarian control and adopt a collaborative alternative. For instructors in learning environments, this may mean a shift from process governor to co-creator, enabler, or midwife. Narrow outcome based approaches can be broadened to accommodate commitment to processes of developmental change. Investments can be made in learning and self-directed learners. Trust is nurtured. Power and responsibility are shared.

For product developers, adaptive co-management may mean a shift from traditional supplier-driven development models to co-creation with customers, intermediaries, complementors and suppliers.

Product developers enable change, but do not control it. Strong trust relationships are built, power is shared and responsibility for suitable outcomes is shared.

Whether adaptive co-management occurs in classrooms, small communities, or product development organizations, the basic elements are the same: willingness to share power and responsibility, take risks, and build strong trust relationships. Trust is not uninformed, naive or blind. Trust recognises that all stakeholders are co-creators of their own collective future. The way ahead can be charted with awareness and intention informed by broader considerations, or it can be left to chance.

The establishment of an organic food market serving students, the use of an open source architectural design process and a model for first-year student learning that conveys both the learners and their knowledge well beyond the classroom are interesting social innovations that resulted from adaptive co-management strategies. All projects met some of the key adaptive co-management criteria. For example, participants in the Carleton Farmers' Market defined the issues and shared responsibility for decisions and actions. The social innovation resulted from key factors: a willingness to work for change, the collaboration of a large and diverse group of students, and a multi-modal approach to generating and sharing knowledge.

The architecture project is an example of social innovation across scales. First, in the larger context, it is an initiative to collaboratively re-design an alternative to the White House. Second, at the level of the individual, it is a graduate project by Edward Solodukhin who embraced this different form of architecture represented in the larger context, and acted autonomously.

His reflexive and creative response is to leverage the opportunity for public design by adopting open source as a model for his architectural design project.

Elements of social innovation are also evident in the Breaking the Ice Symposium. The learners were given minimal rules, allowing participants to define their contributions. Autonomy dominated the power balance as the participants took ownership. Having the freedom to call on their personal networks empowered them as individuals and diversified the sources of knowledge available.

The three projects share some key elements that contribute to social innovation. All three are learner-defined, identify unmet needs and are constrained by minimal rules. All assume that change is both possible and desirable. All are inclusive of diversity. In the case of the market and the symposium projects, the diversity of the founding groups themselves ensures debate. In the architecture design project, open source positions it as a receptor open to many diverse interactions. All three projects represent open systems contingent upon engagement with a wider world for success. In all three, unique configurations of people, ideas, resources and outcomes exist. The processes involved have the potential for multiple iterations and for valuable contributions at more than one scale.

There are also key differences. The participants in the farmers' market project were fourth year university students, while the symposium participants were in first year and thus less familiar with the resources and opportunities offered by the university.



Consensus may be more difficult to achieve in the market and symposium examples while solitary individuals may have fewer resources to draw upon as in the open source architecture example. Participants in the market and symposium examples were drawn mainly from environmental studies, while the architecture project owed its inspiration in part to computer science.

### Conclusions

Adaptive co-management is a paradigm for negotiated, multi-party management that can be used to inspire the learning that leads to social innovation. It can enable innovative learning outcomes in the face of changing conditions and support a range of learning activities. The operating premise embedded in the design of learning activities for social innovation is that change is possible and can be nurtured in a learning environment.

From the perspective of instructors interested in applying adaptive co-management to learning, there is evidence that the application of minimal rules coupled with shared responsibility for decision-making and emphasis on collaborative learning have the potential to nurture social innovation in the form of entrepreneurship in a world increasingly affected by open source assets and processes.

By learning to operate across a range of scales and to share knowledge and responsibility, participants in an adaptive co-management framework collaborate to create a commons for learning that in turn has the potential to create spinoffs. Each participant learns to deal with uncertainty and has the opportunity to acquire the capacity to mentor, to lead, and perhaps, to midwife the process of social innovation. Developing adaptive co-management capability is timely as a new world is waiting to be born.

*Nancy Doubleday is an Associate Professor in the Department of Geography and Environmental Studies, Carleton University. She has been actively involved in social and environmental justice, from local to international levels. She has studied the Canadian Constitution, the taking of water from the Tay River, Arctic contaminants and Inuit health, and international conventions on environmental conservation, biological diversity and environmental protection. Currently she is investigating the integration of ecological-social-cultural change, as a basis for transformative life-long learning, sustainable livelihoods and renewal of our relationships to each other and to the Earth. She has been involved with Arctic and international environmental issues for more than 25 years. Nancy Doubleday was awarded a B.Sc. (Honours) by Brock University, a B.Ed. by the University of Toronto, a L.L.B. by Osgoode Hall Law School, York University, an M.E.S. by York University, and Ph.D. from Queen's University. She is a Member, Bar of Ontario.*

### Recommended Resources

Adaptive Co-Management:  
Collaboration, Learning, and Multi-Level Governance

[http://www.ubcpres.ca/search/title\\_book.asp?BookID=5204](http://www.ubcpres.ca/search/title_book.asp?BookID=5204)

A Group Is Its Own Worst Enemy

[http://www.shirky.com/writings/group\\_enemy.html](http://www.shirky.com/writings/group_enemy.html)

Resilience for Sustainable Development:  
Building Adaptive Capacity in a World of Transformations

<http://www.sou.gov.se/mvb/pdf/resiliens.pdf>

*"All that is valuable in human society depends upon the opportunity for development accorded the individual."*

Albert Einstein

This article describes key conditions that enable a successful university agenda for social innovation. Integral to this success is an overarching institutional commitment to the value of social innovation so that it pervades the university's activities, ranging from the active encouragement of collaboration across the disciplines to policies regarding intellectual property. It is suggested that it is important that social innovation activities transcend disciplinary boundaries and social sectors. Finally, facilitating open access to information and resources may be foundational to achieving relevant and sustainable solutions.

## Five Conditions to Successful Social Innovation

Social innovation seeks to provide sustainable solutions that benefit its recipients, rather than its creators.

Universities are rich in resources that can be mobilized to contribute to solutions to social problems. Researchers have the expertise that provides them with: i) theoretical frameworks that guide the development of solutions and identify potential potholes in the implementation process; and ii) the technical skills to collect and evaluate empirical data addressing the viability of the innovation and measure its impacts. Moreover, universities can transmit information across sectors, through student training and partnerships with funding agencies, private investors, public policy regulators, and the communities themselves.

As suggested by Jackson (this issue), there are five conditions that facilitate a successful social innovation agenda emanating from a university:

1. An institutional strategic policy commitment to social innovation.
2. An inclusive, institutionalized process for mobilizing all faculties and disciplines to advance social innovation.
3. A robust and diversified approach to community engagement.
4. A university-wide commitment to employing free licensing and open-source software (F/LOSS) values and strategies to the research and innovation-transfer process.
5. Mobilization of internal and external resources to support social innovation.

Although there undoubtedly exist numerous other factors that contribute to successful social innovation, our experience suggests that these elements are relevant to mobilizing individuals to work collaboratively across the institution. Social innovation requires a commitment to the resolution of social problems, most of which involve a complex web of interactions that present numerous points of intervention. However, these interventions might also have unintended consequences; some good, some bad. This is where the combined efforts of multiple disciplines might more effectively introduce solutions with manageable, if not foreseeable, long-term outcomes. Finally, although universities typically operate on a not-for-profit basis, the intrinsic motivation of researchers committed to social innovation needs to be acknowledged as valuable, and supported in a manner that ensures that their commitment is not stifled by institutional processes that work against them.

## Strategic Policy Commitment

Universities are governed by traditions such as academic freedom.

## Institutionalized Process

These traditions enable disciplinary checks and balances that ensure that researchers conform to normative lines of inquiry and paradigmatic approaches. These norms are enforced through the peer review system that is fundamental to publication, funding success, and tenure and promotion decisions.

It is widely recognized, however, that the disciplinary peer-based review system impedes interdisciplinary research, as well as knowledge transfer outside the traditional routes of patents and licences.

Conforming to a disciplinary mainstream can be a straightjacket to real innovation. As there is greater recognition that the problems facing society today cannot be solved through restrictive disciplinary channels, there is an increasing effort to overcome these intellectual boundaries and to encourage cross-sector partnerships. Unfortunately, many of our academic journals are not only oriented to disciplinary audiences (and are reviewed accordingly), but are often specialized to specific fields within a discipline.

Granting agencies, like universities, are publicly accountable, and so efforts are being made to identify opportunities and processes that might support research that breaks from disciplinary traditions. Universities can play a crucial role in promoting such a paradigm shift by making a conscious commitment to promote innovative activities, facilitate links with the community, encourage interdisciplinary initiatives, and reward researchers for engaging in activities that transcend traditional expectations.

If universities are to truly take responsibility for contributing to innovative solutions to social problems, they need to take the lead in revising internal processes and reward systems to promote such cultural shifts within the academic sphere.

Various universities have established research centres focused on social innovation. Most build on specific disciplinary roots, such as Social Work or Business.

At other universities, stand-alone institutes or centres have evolved that presumably facilitate collaboration across disciplinary boundaries, and foster more comprehensive outreach to the social sector. However, these institutes themselves can run the danger of becoming isolated silos unless their activities are intricately woven into the fabric and activities of the various contributing units and the community that benefits from their work. Such inclusiveness requires a combination of grass-roots efforts within disciplines committed to social innovation and conscious outreach initiatives on the part of the social innovation leaders of the institution.

Inclusiveness and outreach initiatives need to be buttressed by institutional support that acknowledges the strategic value of promoting social innovation through the synergistic efforts of various disciplinary perspectives and expertise. Institutions can do this by strategically committing to the resolution of specific social issues, such as environmental sustainability or social inequities in a global economy. The prioritization of such pressing and far-reaching issues provides a rallying point to establish dialogue across disciplines, creates a basis for partnerships between universities and external organizations, and attracts the attention and interest of students who continue to hold before them the ideal of generating social change to create a better world.

## Approach to Community Engagement

Just as socially innovative solutions reflect the synergies among disciplinary approaches to address pressing social issues, their sustainability comes from the internalization of the value of social innovation across contributing sectors and uptake organizations. This can happen at many levels. Universities are particularly well placed to engender a commitment to social innovation in our next generation by integrating innovative thinking, a commitment to the community, and experiential learning among the student body. The university that embraces social innovation as a strategic priority, that ensures that its professoriate experiences reward for engaging in social innovation through their own research and outreach, and facilitates the capacity to integrate such experiences for students in and out of the classroom will figure largely in contributing to the innovative solutions to the issues of today and tomorrow.

Many community groups are intimidated by the ivory tower of the university, and others simply view the university as disconnected from reality. The greater the university's capacity to create connections with local communities, profit and not-for-profit organizations, and public institutions, the greater its ability to make a difference.

Connections to local communities can be achieved through student placements, public talks, carrying out joint projects to address social issues, and by pulling community leaders into university decision-making processes. The outreach efforts of the university are likely to be reciprocated with open communication and dialogue with communities that recognize themselves as equal partners and benefactors of this process, which in turn expands on the opportunities available to students and researchers alike.

## Commitment to Open Source

In the past, university innovation has been associated with technology transfer, and the creation of patents and licenses within a closed system. Increasingly, organizations are recognizing the value of open systems that encourage contributions from expert users and benefactors of new technologies. Universities committed to social innovation can contribute to this process by establishing an innovation transfer process that promotes the development of ideas at initial stages, including collaboration among students, faculty, and potential industry partners. Supporting innovative ideas, and fostering open source access and development, results in technology that best suits the end user, and provides a robust platform for further development.

Open source software (OSS) for education purposes was identified as being of particular interest to UNESCO for use in developing countries. It is equally relevant to disadvantaged segments of our own society. OSS can be used for providing education (including the development of non-traditional educational tools) to disadvantaged groups, democratizing social change through citizen journalism and social advocacy, and providing tools for effective organization and governance to not-for-profit organizations. These efforts are typically initiated by volunteer educators, students, and researchers. They may be financially backed by investors, including innovation transfer offices, but are often able to generate revenues by providing additional services related to the software.

Universities have the talent to develop open source technologies. By establishing an approach to intellectual property that facilitates open innovation, they can make a considerable contribution to maximizing the extent to which effective solutions are developed and distributed.



## Mobilization of Resources

Critical to the success of any innovative solution is the political will to support new approaches, the human resources to provide the time and commitment to developing and implementing a solution, and the will of the private and public sectors to provide the tangible resources necessary to do so. However, the sustainability of socially innovative solutions depends on their capacity to reduce resource requirements and to demonstrate cost effectiveness to the public sector and profit gains to the private. Universities have a unique role to play by providing the resources that reflect an institutional commitment to social innovation, by facilitating the ability of researchers to acquire external funding for relevant projects, by enabling outreach efforts and partnerships with the community, and by maximizing opportunities for students to be engaged in the process from the development of the ideas to the implementation and evaluation of the solutions. This represents a huge commitment of human and financial resources.

To the extent that social innovation is intrinsic to the values and objectives of a university, the resources to support the necessary infrastructure can be mobilized with relative ease. These include co-op offices that identify appropriate opportunities for placements, research offices that pro-actively match funding opportunities to research initiatives, and human and financial support for outreach activities that raise awareness among various potential stakeholders and investors. The commitment to providing the institutional support that enables community engagement will inevitably pay off to a university as it establishes a reputation for success in the domains in which it has strategically committed itself to making a difference.

## Conclusion

Universities often operate in a manner that is relatively rigid in processes, structures, and reward systems. Universities have to consciously consider strategies that support alternative models for how disciplines work together, how they work with communities, and what their researchers are rewarded for producing. Although the appetite of researchers and students for cross-disciplinary communication to find innovative solutions to social problems is considerable, numerous institutional and disciplinary practices present obstacles to acting on these interests. Embracing social innovation requires visible support at all levels of the institution in order to instigate a cultural shift supportive of social innovation. The five factors presented in this article provide a framework for universities to evaluate operations, prioritize efforts, and guide a course of action. Universities are rich with resources to contribute to innovative solutions to pressing social problems; it is incumbent upon them to ensure that they are a part of the solution, and not the problem.

*Kim Matheson is Carleton University's current Vice-President (Research and International). She joined the Department of Psychology at Carleton University as a SSHRC Canada Research Fellow, and was promoted to Full Professor in 2003. She received her Ph.D. from the University of Waterloo and is a Carleton alumna. As Chair of the Department of Psychology from 1997 until 2003, she presided over the largest academic unit at the University. She is currently a member of the Boards for the Sudbury Neutrino Observatory Institute, the High Performance Computing Virtual Laboratories, and the Internet Security and Safety Network. She is on the Advisory Board to the Social Interactions, Identity, and Well-being Panel of the Canadian Institute for Advanced Research.*

*"Engagement – in which institutions and communities form lasting relationships that influence, shape, and promote success in both spheres – is rare. More frequently, there is evidence of unilateral outreach, rather than partnership based on mutual benefit, mutual respect, and mutual accountability."*

W.K. Kellogg Foundation  
<http://www.wkkf.org/pubs/YouthEd/Pub665.pdf>

The Association of Universities and Colleges of Canada (<http://www.aucc.ca>) informs us that our universities produce one-third of the roughly \$10 billion in research and development generated in Canada. Our post-secondary institutions house some of Canada's most talented inventors and analysts as well as some of the best laboratories and think-tanks. The full value of this innovation is achieved when a university is able to successfully engage with the local geographic community in which it is based, including specific communities of interest that reside in the locality.

Such meaningful and continuous community-university engagement (CUE) at the local level is a crucial pre-condition before a university can successfully execute partnerships with open source communities, which by their nature are dispersed across the globe, to create social value. By effectively engaging both the local and open source communities, Canadian universities can play a pivotal role in social innovation that addresses challenges in our own country as well as overseas. Accordingly, universities across Canada should increase their CUE factors by deepening and broadening their teaching, research and volunteering activities with the external constituencies that have the greatest need for sustainable solutions to the challenges they face every day.

If social innovations are to make a real difference, Canadian universities must step forward in a major way. This article sets out a dynamic model for CUE and provides examples of creative local initiatives.

### Social Innovation Matters

Canada's need for robust, creative and relevant social innovation isn't a purely academic matter. Volatile commodity prices in the lightning-fast global economy, the vapourization of tens of thousands of manufacturing jobs, urban homelessness, stagnant rural regions, an aging workforce, Aboriginal poverty, climate change, and pollution are only some of the challenges we face in our country. While these challenges are not unique to Canada, Canada's low population density adds to the difficulty in providing effective solutions. Universities can play an important role when they engage with their local communities.

What exactly is social innovation? The J.W. McConnell Family Foundation (<http://www.mcconnellfoundation.ca>), Canada's largest private foundation, defines social innovation as: "Innovative approaches to addressing Canada's social and economic challenges – in ways that are related and sustainable." The Stanford Social Innovation Center (<http://www.gsb.stanford.edu/csi/>) refers to it as: "The creation of social and environmental value. New ideas that solve social problems."

Many advocates of social innovation, like the MaRs Centre in Toronto (<http://www.marsdd.com/>) and Ontario's Talent First Network (TFN, <http://www.talentfirstnetwork.org>), emphasize the application of new technology, or new uses of existing technology, to solve social problems.

Others, such as Frances Westley and her colleagues at the University of Waterloo (<http://sig.uwaterloo.ca>), highlight innovative organizational and policy processes, practices, partnerships and resource flows. All of these elements, of course, are important.

### Social Solutions Through Open Source

The list of possible social innovations that meet urgent needs seems endless. Some examples include:

- software to improve the accounting, fundraising, management and on-line service delivery of non-profits working on the front-lines of social change
- telecommunications innovations for low-cost connectivity and collaboration in the social sector and to access market data and business opportunities for social enterprises that employ marginalized citizens and offer reasonable-cost products and services
- green energy technologies, including wind turbines, photovoltaics and small-hydro systems
- water and air-purification technologies
- green construction design and materials for affordable housing and social infrastructure such as health centres, seniors facilities, day-care centres and hospices
- low-cost prosthetics and other aids for persons with physical disabilities
- medical and health-care applications of nano-sensors
- GPS-driven landmine clearance technologies
- biotechnology innovations for faster-growing urban-agriculture produce

- biotechnology innovations for faster-growing urban-agriculture produce
- conversion of single automobile technologies into mass-transit components
- design of social-finance products and tools to finance the beta-testing then scaling up social innovations

While some open source projects exist to address these needs, developing applications for social innovation is an emerging software field where the needs far outweigh the available software. This provides interesting opportunities for universities to engage their local community in the establishment and cocreation of niche open source projects.

In his 2008 University of Regina PhD dissertation "The Role of Free Knowledge at Universities and its Potential Impact on the Sustainability of the Prairie Region", Roger Petry found that a free/libre open source software (F/LOSS) approach to research on sustainable development is compatible with the values and career priorities of university-based researchers. Petry concludes that a F/LOSS orientation is better aligned with the motives of academic researchers than is a purely commercial approach. In general, university researchers tend to be committed to freedom of inquiry, advancing knowledge in their fields, using their research to contribute to positive social and environmental change, and collaborating with their peers. These findings have strategic and policy implications for universities and governments, both of which have assumed that the conventional intellectual property rights (IPR) approach is the correct model. In contrast, the Petry study indicates that free licensing, open source and copy left constitute an alternative in the university. While further research is needed, it is clear that both the IPR and F/LOSS models provide value in social innovation projects.

## Pre-Conditions for Successful Alignment

Our ongoing work at Carleton University, together with experience elsewhere, suggests that there are five pre-conditions for universities to be able to align their capabilities fully with a social innovation focus:

1. A high-level strategic policy commitment to social innovation by the institution as a whole.
2. An inclusive, institutionalized process for mobilizing faculties and disciplines, individually and collectively, to advance social innovation.
3. A robust, diversified, and effectively coordinated approach to community engagement through serious learning, field practica, co-operative placements, community-based research, continuing education and volunteering.

4. A university-wide commitment to employing F/LOSS strategies to the research and the innovation-transfer process.

5. Mobilization of significant internal and external resources for funding the design, testing and replication of social-purpose technologies, products and services.

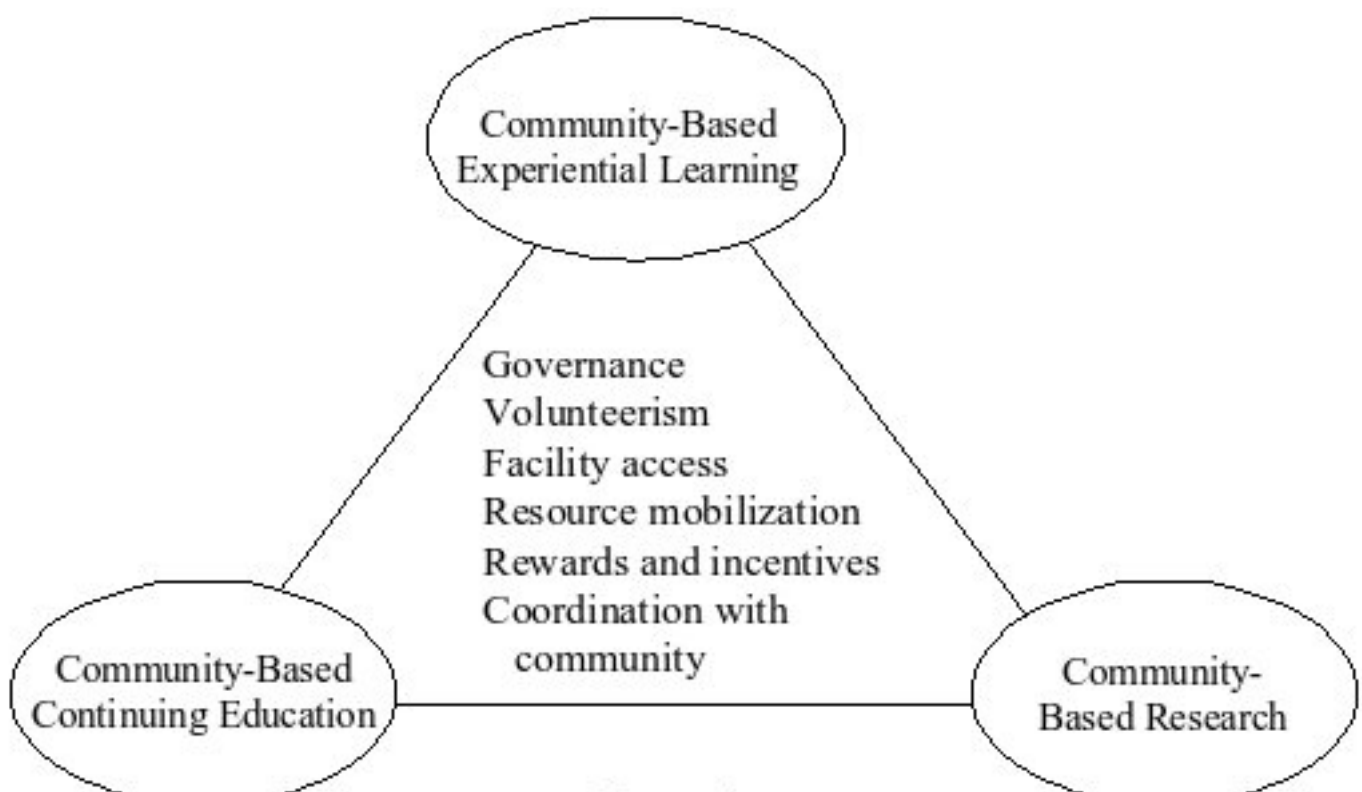
Carleton University is working hard to put these pre-conditions in place, and is making good progress. Other post-secondary institutions are taking or considering similar steps.

## Community-University Engagement Model

As seen in Figure 1, CUE can be viewed as a dynamic triangle with three interactive spheres of activity:

1. community-based experiential learning
2. community-based research
3. community-based continuing education

**Figure 1: The Dynamic Triangle of CUE**





Inside the triangle are other elements, such as volunteerism, access to facilities and capital mobilization. The greater the dynamism and depth of engagement within and among the spheres, the more substantial and effective is the CUE factor.

Experiential learning refers to a wide range of practices. Community-based service learning (CSL) in undergraduate and graduate programs is growing across the country, propelled by competition for students and the use of engagement methods to bolster student retention and success. The Canadian Alliance for Community Service Learning (<http://www.communityservicelearning.ca>) stresses the importance of achieving mutual outcomes through CSL that benefit both educational and community organizations.

Included in the umbrella concept of experiential learning are field-based practicums, often run by professional schools, paid co-operative placements in community-based and public agencies, and non-credit co-curricular activities such as study tours, conferences and local projects. This wide range of forms and modalities of experiential learning obliges universities to find new and better ways of coordinating with a diverse set of external community partners in local agencies and industry.

In the sphere of community-based research (CBR), a wide range of forms of activity exist. Working with individual faculty members, or under the auspices of university-based research centres, students carry out qualitative and quantitative data collection and analysis on issues of concern to community organizations, governments and companies. Sometimes students and faculty members are part of integrated research teams that include community members and non-academic professionals.

A new Pan-Canadian Coalition on Community-Based Research (<http://cuexpo2008.wordpress.com/2008/05/09/launch-of-the-pan-canadian-coalition-on-community-based-research/>) led by Victoria, Quebec-at-Montreal and Carleton universities has been set up to advance further the theory, practice and impact of CBR. Such action-oriented research may also be undertaken in multiple sites across a city, such as Carleton's emerging work with the University of Ottawa on the City of Ottawa's No Community Left Behind ([http://www.nocommunityleftbehind.ca/main\\_e.htm](http://www.nocommunityleftbehind.ca/main_e.htm)) strategy, aimed at reducing crime and improving services and livelihoods on a neighbourhood-by-neighbourhood basis. Other local examples of CBR include:

1. Carleton University's Innovation Transfer Office working with Volunteer Ottawa (<http://www.volunteerottawa.ca/>), a local group of non-profits, is applying F/LOSS innovations to create low-cost telecommunications solutions to reduce the long-distance phone bills of these highly connected organizations.
2. Carleton University's Innovation Transfer Office, the Community Foundation of Ottawa (<http://www.communityfoundationottawa.ca/>), Volunteer Ottawa, and the Centre for Voluntary Sector Research and Development (CVSRD, <http://www.cvsrd.org>) collaborate to run the annual Social Innovation Challenge (<http://www.carleton.ca/sic/>) that seeks the best student ideas to help charities address social and environmental needs. Proposals come from individuals and teams in all faculties and disciplines, and the top ideas receive advice and seed money for beta testing and implementation.

The third sphere in the triangle, building community-based continuing education programs on the basis of social-sector needs, is another important task.

The Carleton Centre for Community Innovation (<http://www.carleton.ca/ccci/>) organized a symposium on program-related investments through equity investments, loans and grants in third-sector projects for leaders in the foundation, finance, policy and research communities. Another example illustrates the potential for converting continuing education into a degree-program stream that is inherently engaged with the community. For many years, the CVSRD has undertaken joint action-research, policy analysis, networking and coaching with the voluntary sector in Ottawa and across Canada. Through an array of meetings, symposia, networks and projects, the Centre offered tools and information that informally educated leaders and managers in the sector. Two years ago, CVSRD joined forces with Carleton's School of Public Policy and Administration to offer a new, graduate-level course on non-profit governance and management. It has been over-subscribed, drawing students from the sector as well as the university's full-time student body.

### Other Elements

There are several other elements inside the CUE triangle. We offer several illustrative examples for these elements.

**Volunteerism:** faculty members, university staff and student associations are often active as volunteers and in raising funds to meet social and environmental needs. At many universities, the annual United Way campaign mobilizes a large segment of the university community. Student groups like Engineers Without Borders (<http://www.ewb.ca/>) raise funds and send volunteers for overseas community projects to improve water supplies and other infrastructure. Universities can also offer the community access to facilities.

This past summer, Black Affinity (<http://pamorama.carleton.ca/2008-01/102.htm>) ran a pilot music and recreation program on campus for low-income children ages 10-14. Called Rise and Flow, the camp attracted 30 participants, most from the Russell Heights neighbourhood of Ottawa, an area that faces many social challenges. A local community organization is now talking with Black Affinity about offering a version of Rise and Flow as an after-school program in the community.

Robust volunteerism is evident at the highest level of most Canadian universities. The Boards of Governors of our post-secondary institutions are populated by accomplished leaders from the business, government and non-profit sectors—all serving on a voluntary basis. Community volunteers, therefore, play key roles in the governance of our universities.

**Rewards and Incentives:** to promote CUE in the most comprehensive manner possible, universities must align their rewards and incentives with this objective. Tenure and promotion policies must recognize the value of community-engaged scholarship (<http://depts.washington.edu/ccph/scholarship.html>), either through separate promotion tracks for community-oriented faculty or through a more thorough integration of criteria that value CUE in teaching and research into the university's overall policies and practices. A team at Carleton University from Social Work, Political Science and Public Policy animated a discussion on this topic at the 2008 Community-University Exposition (<http://www.cuexpo08.ca/>). The Campus-Community Partnerships for Health network in the United States has produced a toolkit (<http://depts.washington.edu/ccph/toolkit.html>) to assist community-engaged scholars in making their case for promotion.

**Resource Mobilization:** priority should be placed on mobilizing university funds for experiential learning and community-based research in the field of social innovation. Small challenge grants or loans can be powerful catalysts. Large capital pools managed by the institution should also be tapped to advance social-purpose projects. University endowments and pension funds can utilize program-related investments across a number of asset classes including: clean technology, green energy, low-cost health-care, mass-transit, green construction, affordable housing and real estate projects for day care, seniors' care and hospices. Such capital mobilization requires education of university executives, boards of governors and trustees. There are resource-mobilization challenges and opportunities in the community. Most non-profits are chronically under-funded. Education and research budgets should build in reasonable honoraria for community-organization staff time and expenses devoted to planning, monitoring and supervision. Where possible, universities should establish shared decision-making models with community organizations over the strategy, policy and budgeting of joint education and research initiatives.

**Co-ordination:** a university's CUE factor can only be maximized when there are appropriate and effective mechanisms to coordinate CUE at all levels. In the US, a number of universities have created centres that bring together student-affairs staff and services with academic staff and programs. Often such centres train and support faculty, and liaise with students and community organizations, in the delivery of large-scale service learning involving both undergraduates and graduates. Sometimes these centres provide scholarships for low-income students, fellowships for community activists, start-up grants for CBR initiatives, as well as travel and security support for students.

In Canada, a variety of coordination models have emerged at individual universities. St. Francis Xavier University runs a large-scale service learning program for undergraduates. Trent University operates a centre that is directed by a community board and engages in both education and research in two municipal regions surrounding the campus. The University of Victoria has set up a university-wide Office for Community-Based Research (<http://www.uvic.ca/ocbr/>), whose advisory board is led by a majority of community representatives. In the past year, the same university has instituted a senior-level committee of Deans and Vice-Presidents to coordinate the efforts of the university in civic engagement. At Carleton, we are developing a coordination model based on the rich experiences of numerous research centres and institutes with active, and sometimes long-standing, community partnerships. We also benefit from the work of the Community-Based Research Network of Ottawa ([http://www.spcottawa.on.ca/CBR\\_NO\\_website/home\\_cbrno.htm](http://www.spcottawa.on.ca/CBR_NO_website/home_cbrno.htm)), a joint creation of faculty and social-service agency leaders. At the university-wide level, our Vice-President (VP) Research has catalyzed a number of cross-faculty processes, including an initiative on Environment and Health. Both the VP Research and the Provost have supported a pan-university committee, the Initiative for Community-University Engagement (ICUE), which is documenting Carleton's contributions to its surrounding community and recommending ways of expanding and strengthening our CUE factor. Finally, the VP Research chairs the Carleton Social Innovation Advisory Committee, comprising community and university leaders active in various forms of social innovation, with open source a central concept in the committee's deliberations. Building on all these components, an overall coordination structure for CUE for social innovation should emerge at Carleton in the next two years.

### Conclusion

The CUE factor is crucial to the growth and impact of social innovation in Canada, and to our contributions in this field internationally. Through effective partnerships with citizens and organizations seeking to address complex and urgent social challenges, Canadian universities can create social and environmental value and solve social problems in a cost-effective and sustainable way. In order to do so, universities must commit to fully aligning their capacities with the social innovation agenda.

*Edward Jackson is Associate Dean (Research and Graduate Affairs) in the Faculty of Public Affairs at Carleton University in Ottawa, where he teaches public policy and international affairs. He chairs Carleton's Initiative for Community-University Engagement, and is a member of the Carleton Social Innovation Advisory Committee. He is also a member of the steering committees of the Causeway Initiative on Social Finance, the Canadian Alliance for Community-Service Learning and the Pan-Canadian Coalition for Community-Based Research.*

### Recommended Resources

Creating a Supportive Environment for Community-University Engagement

<http://tinyurl.com/4xrekg>

Accelerating our Impact: Philanthropy, Innovation and Social Change

<http://tinyurl.com/4tjhhr>

Carleton University Social Innovation Initiative

<http://tinyurl.com/4gnkjb>

Tides Canada

<http://www.tidescanada.org>

### October 1-2

PST2008

#### Fredericton, NB

The annual Privacy, Security and Trust research conference is unique in its broad approach including examining the issues from both the research and practice perspectives, encouraging multidisciplinary research, and fostering collaboration between academe, the private sector and government. The theme for PST2008 is "privacy, security and trust - enabling innovation".

<http://www.unb.ca/pstnet/pst2008/>

---

### October 1-4

Access 2008!

#### Hamilton, ON

Access is Canada's premier library technology conference that focuses on issues relating to technology planning, development, challenges and solutions. Hackfest is a day long event, taking place prior to the regular conference program on Wednesday, October 1st, 2008 at Hamilton Public Library.

<http://access2008.blog.lib.mcmaster.ca>



## UPCOMING EVENTS

### October 7-8

SecTor

#### Toronto, ON

SecTor brings the world's brightest (and darkest) minds together to identify, discuss, dissect and debate the latest digital threats facing corporations today. Unique to central Canada, SecTor provides an unmatched opportunity for IT Professionals to collaborate with their peers and learn from their mentors.

<http://www.sector.ca/default.htm>

---

### October 7-9

Ottawa Venture & Technology Summit

#### Ottawa, ON

As the region's premier risk capital event, it provides an opportunity for selected companies to present directly to a large audience of local and foreign investors. This year participation is open to both early and mid-stage companies.

<http://www.ottawavts.com/2008/>

---

### October 9-10

CLLAP 2008

#### Quebec City, QC

The conference on free software and public administrations offers the opportunity to meet administrators who have already adopted open source, to obtain answers to your questions, and to discover convincing experiments which have taken place in Quebec, the remainder of Canada or abroad.

<http://www.cllap.qc.ca/cllap-2008/accueil/>

### October 21-23

Corporate Web 2.0 & Social Media

#### Toronto, ON

Learn the latest technology and communication strategies and how they can drive performance and improve your bottom line. Conference topics include how to drive business by building social communities and how to design and implement wikis to enable employee sharing and enhance department functionality.

<http://www.infonex.ca/843/overview.shtml>

---

### October 23-24

FSOSS 08

#### Toronto, ON

Open source, open content, and open formats are changing the way we work, play, and learn. From software to the web to television and the media, the open source movement is spreading. Come see and hear the future in person from some of the most important thinkers in open technologies.

<http://fsoos.senecac.on.ca/2008/>

---

### October 25

Ontario Linux Fest

#### Toronto, ON

Finally a grass roots conference for Linux and Open Source right here in Ontario. The Ontario Linux Fest is a conference for all things Linux and Open Source.

<http://onlinux.ca/>

## UPCOMING EVENTS

### October 27-31

ACM International Conference on Multimedia

#### Vancouver, BC

ACM Multimedia 2008 covers all aspects of multimedia computing: from underlying technologies to applications, theory to practice, and servers to networks to devices. The technical program will consist of plenary sessions and talks with topics of interest in: (a) Multimedia content analysis, processing, and retrieval; (b) Multimedia networking and systems support; (c) Multimedia tools, end-systems, and applications; and (d) Human-centered multimedia.

<http://www.mcrlab.uottawa.ca/acmmm2008/>

### November 3-December 8

Eclipse Training

#### Ottawa, ON

The Eclipse Foundation, in partnership with Eclipse members, is offering a series of training classes. This is your opportunity to learn Eclipse techniques, tips and tricks from experts. The instructor-led training courses will feature classes on Eclipse Basic RCP, Eclipse Advanced RCP, Equinox OSGi and Eclipse Modeling. Courses are available at cities across the globe, with team members from Ottawa's Code9 (<http://code9.com>) presenting in Ottawa, Austin and Portland.

<http://www.eclipse.org/community/training/2008fall.php>

## ADVERTISERS



Delivering flexible, reusable software in a timely fashion is increasingly challenging. Business agility demands software agility. Code 9 and its commitment to highly componentized software systems through the use of Eclipse, Equinox and OSGi help you tame these challenges. The Code 9 team leads the projects and wrote the books on these key Eclipse technologies. Visit us at <http://code9.com> and deliver software agility in your organization.

Learn more about Eclipse RCP and Equinox OSGi by attending a training session this fall:

<http://eclipse.org/community/training/2008fall.php>

## **Open Source BI in Canada Celebrates its 1st Birthday**

**August 8, Toronto, ON**

It's been one year since SQL Power Group open sourced its Business Intelligence tools, and the company is already poised to be a world-wide leader in the field. In July of 2007, SQL Power jumped into the Open Source fray and published the source code of their very popular Data Modeling and Data Profiling tool, the Power\*Architect, making them first-to-market with a cross-platform, Open Source data modeling tool and the first Canadian Open Source BI company. Since then, over 100,000 users from around the globe have downloaded this widely used Data Modeling tool.

<http://www.sqlpower.ca/page/news-os-1year>

## **Open Source Tool Developed by Carleton University Interns Wins Linux-World Product Excellence Award**

**September 1, Ottawa, ON**

Ontario's Talent First Network (TFN) and Carleton University are pleased to announce that Ingres CAFE (Consolidated Application Foundation for Eclipse) won this year's LinuxWorld Product Excellence Award in the Best Application Development Tool category. LinuxWorld is one of the most comprehensive marketplaces for open source products and services in the world. Carleton University students developed the award winning product while working as interns for the Ingres Corporation in Ottawa.

<http://www.sprott.carleton.ca/news/2008/linux.html>

---

## **FACIL Contests Government Practices in the Superior Court**

**August 28, Montreal, QC**

FACIL, a non-profit association which promotes the collective appropriation of Free Software, contests the Quebec government purchasing methods for software used within public administrations. FACIL has filed a motion before the Quebec Superior Court in order to bring an end to methods which the association believes are not the best interest of the Quebec government, but more importantly, not in accordance with the regulation for supply contracts, construction contracts and service contracts of government departments and public bodies.

<http://facil.qc.ca/en/media/20080828-facil-contests-the-quebec-government-purchasing-methods-for-software>

The goal of the Open Source Business Resource is to provide quality and insightful content regarding the issues relevant to the development and commercialization of open source assets. We believe the best way to achieve this goal is through the contributions and feedback from experts within the business and open source communities.

OSBR readers are looking for practical ideas they can apply within their own organizations. They also appreciate a thorough exploration of the issues and emerging trends surrounding the business of open source. If you are considering contributing an article, start by asking yourself:

1. Does my research or experience provide any new insights or perspectives?
2. Do I often find myself having to explain this topic when I meet people as they are unaware of its relevance?
3. Do I believe that I could have saved myself time, money, and frustration if someone had explained to me the issues surrounding this topic?
4. Am I constantly correcting misconceptions regarding this topic?
5. Am I considered to be an expert in this field? For example, do I present my research or experience at conferences?

If your answer is "yes" to any of these questions, your topic is probably of interest to OSBR readers.

When writing your article, keep the following points in mind:

1. Thoroughly examine the topic; don't leave the reader wishing for more.
2. Know your central theme and stick to it.
3. Demonstrate your depth of understanding for the topic, and that you have considered its benefits, possible outcomes, and applicability.
4. Write in third-person formal style.

These guidelines should assist in the process of translating your expertise into a focused article which adds to the knowledgeable resources available through the OSBR.

### Upcoming Editorial Themes

<b>October 2008</b>	Building Community
<b>November 2008</b>	Health and Life Sciences
<b>December 2008</b>	Enabling Innovation
<b>January 2009</b>	Enterprise Participation
<b>February 2009:</b>	Commercialisation
<b>March 2009:</b>	Geospatial
<b>April 2009:</b>	Open APIs



**Formatting Guidelines:**

All contributions are to be submitted in .txt or .rtf format and match the following length guidelines. Formatting should be limited to bolded and italicized text. Formatting is optional and may be edited to match the rest of the publication. Include your email address and daytime phone number should the editor need to contact you regarding your submission. Indicate if your submission has been previously published elsewhere.

**Articles:** Do not submit articles shorter than 1500 words or longer than 3000 words. If this is your first article, include a 50-75 word biography introducing yourself. Articles should begin with a thought-provoking quotation that matches the spirit of the article. Research the source of your quotation in order to provide proper attribution.

**Interviews:** Interviews tend to be between 1-2 pages long or 500-1000 words. Include a 50-75 word biography for both the interviewer and each of the interviewee(s).

**Newsbytes:** Newsbytes should be short and pithy--providing enough information to gain the reader's interest as well as a reference to additional information such as a press release or website. 100-300 words is usually sufficient.

**Events:** Events should include the date, location, a short description, and the URL for further information. Due to the monthly publication schedule, events should be sent at least 6-8 weeks in advance.

**Questions and Feedback:** These can range anywhere between a one sentence question up to a 500 word letter to the editor style of feedback. Include a sentence or two introducing yourself.

**Copyright:**

You retain copyright to your work and grant the Talent First Network permission to publish your submission under a Creative Commons license. The Talent First Network owns the copyright to the collection of works comprising each edition of the OSBR. All content on the OSBR and Talent First Network websites is under the Creative Commons attribution (<http://creativecommons.org/licenses/by/3.0/>) license which allows for commercial and non-commercial redistribution as well as modifications of the work as long as the copyright holder is attributed.

The OSBR is searching for the right sponsors. We offer a targeted readership and hard-to-get content that is relevant to companies, open source foundations and educational institutions. You can become a gold sponsor (one year support) or a theme sponsor (one issue support). You can also place 1/4, 1/2 or full page ads.

For pricing details, contact the Editor [dru@osbr.ca](mailto:dru@osbr.ca).

Department of Systems and Computer Engineering

# **Technology Innovation Management**

**Challenging, Innovative and Relevant**



A unique Master's degree for experienced engineers.

<http://www.carleton.ca/tim>



The Talent First Network program is funded in part by the Government of Ontario.



The Technology Innovation Management (TIM) program is a master's program for experienced engineers. It is offered by Carleton University's Department of Systems and Computer Engineering. The TIM program offers both a thesis based degree (M.A.Sc.) and a project based degree (M.Eng.). The M.Eng is offered real-time worldwide. To apply, please go to: <http://www.carleton.ca/tim/sub/apply.html>.